

# MEMORANDUM


DEPARTMENT OF ENVIRONMENTAL QUALITY  
DIVISION OF WATER PROGRAMS COORDINATION  
OFFICE OF SPILL RESPONSE AND REMEDIATION

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**SUBJECT:** GUIDANCE MEMORANDUM 01-2025  
PETROLEUM STORAGE TANK COMPLIANCE MANUAL

**TO:** Regional Directors

**FROM:** Larry G. Lawson 

**DATE:** October 12, 2001

**COPIES:** Regional Storage Tank Program Managers, Andy Hagelin, Robyne L. Bridgman, Russ Ellison, Sam Lillard, Amy Harshman, Mary Jo Leugers

The DEQ Storage Tank Program has developed the first edition of the Storage Tank Program Compliance Manual. This document provides guidance to staff who are involved in the compliance and inspection of storage tanks. The manual is divided into the following six volumes:

Volume I – Program Fundamentals  
Volume II – Registration and Closure  
Volume III -- Underground Storage Tank Pollution Prevention  
Volume IV – Aboveground Storage Tank Pollution Prevention  
Volume V – Oil Discharge Contingency Plan  
Volume VI – Financial Responsibility

Because of the significant scope of this undertaking, the volumes are in various stages of development. The most completely developed volumes are Volume I: Program Fundamentals; Volume V: Oil Discharge Contingency Plan; and Volume VI: Financial Responsibility. The Manual team will next focus on completing Volumes II: Registration and Closure; III: UST Pollution Prevention; and IV: AST Pollution Prevention. The volumes will include not only regulatory and statutory interpretations, but also program procedures and inspection guidance. Until incorporated into the manual, interpretations and procedures issued via memoranda will continue to apply. Moreover, in years to come, interim interpretations will be recorded in writing (memoranda) and apply until incorporated into the next annual update of the manual.

This manual was developed using a collaborative process by the team members included in the Tank Compliance Manual Project Team charter. A draft of this document was sent to the regional Storage Tank Program Managers for comment. Comments from the Regional

staff and managers were then incorporated into the manual. Please express my appreciation to the team members and all other agency staff who participated in the development of the manual.

The Petroleum Storage Tank Compliance Manual will be placed on the DEQ Web Page. If you have any questions about the Manual, please contact Sam Lillard.

#### **DISCLAIMER**

**This document provides procedural guidance to the DEQ Petroleum Storage Tank Program staff. This document is for guidance only. It does not establish or affect legal rights or obligations. It does not establish a binding norm and is not finally determinative of the issues addressed. Agency decisions in any particular case will be made by applying the State Water Control Law and the implementation regulations based on the site-specific facts.**

**VIRGINIA DEPARTMENT  
OF  
ENVIRONMENTAL QUALITY**

**PETROLEUM STORAGE TANK PROGRAM  
COMPLIANCE MANUAL**



# STORAGE TANK PROGRAM COMPLIANCE MANUAL

## VOLUME I PROGRAM FUNDAMENTALS

(October 12, 2001)



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# **1. INTRODUCTION**

The Virginia Department of Environmental Quality's Tank Compliance Program regulates underground and aboveground storage tanks in an effort to protect the environment and promote the health and well-being of Virginia's citizens. The program's goal is to ensure tanks meet requirements intended to prevent environmental contamination from leaks and spills.

Numerous tanks exist throughout the state. Although some tanks are exempted or excluded from compliance requirements, the program regulates approximately 31,500 USTs at 25,000 UST facilities, which store 314,000,000 gallons of regulated substances, and approximately 8,000 ASTs at 2,300 AST facilities, which store 1,300,400,000 gallons of oil.

This manual describes the current procedures for addressing tank compliance requirements and replaces previously issued guidance. The policies and procedures contained within this manual are intended to (1) implement the program goal of preventing environmental contamination and (2) promote statewide consistency in the application of compliance requirements. The scope of this manual includes program guidance related to assessing tanks for compliance with the provisions of State Water Control Law and related regulations from the time of tank installation through closure. This manual does not address program guidance applicable to remediation or reimbursements. These topics are addressed in the Petroleum Storage Tank Technical Manual and the Virginia Petroleum Storage Tank Fund Reimbursement Guidance Manual, respectively. Additionally, this manual does not address inspection activities related to State Air Pollution Control Law, nor does it include enforcement policies. Rather, the DEQ Enforcement Manual includes the Agency's enforcement guidance.

The Agency's Central and Regional Office staff members collaborated to develop this manual as a guidance document for DEQ personnel. Consultants and tank owners and operators also may find the information in this manual useful. Copies are available to the public upon request, and an electronic version of the manual is available through the Agency's website at [www.deq.state.va.us](http://www.deq.state.va.us).

## **2. STATUTORY AND REGULATORY FRAMEWORK**

### **2.1 ASTs**

#### **2.1.1 Federal AST Law and Regulations**

There is no comprehensive federal statute or regulation that directly parallels Virginia's AST Program requirements. Although the United States Congress has considered bills that would create a regulatory structure for ASTs similar to that which exists for USTs, none have been passed. While no federal AST program has been established, certain federal legislation and regulations nonetheless apply to ASTs. The following list includes the web addresses containing these federal laws and regulations:

Oil Pollution Act of 1990 (“OPA 90”) –

[www.epa.gov/region09/waste/sfund/oilpp/opa](http://www.epa.gov/region09/waste/sfund/oilpp/opa)

Clean Water Act (CWA), 33 USC 1321, Oil & Hazardous Substance Liability –

[www.access.gpo.gov/uscode/uscmmain.html](http://www.access.gpo.gov/uscode/uscmmain.html)

40 CFR Part 112, Spill Prevention, Control, and Countermeasure (SPCC) --

[www.access.gpo.gov/nara/cfr/waisidx\\_00/40cfr112\\_00.html](http://www.access.gpo.gov/nara/cfr/waisidx_00/40cfr112_00.html)

33 CFR 154 – Oil Pollution Prevention Regulations for Marine Oil Transfer Facilities

[www.access.gpo.gov/nara/cfr/waisidx\\_00/33cfr154\\_00.html](http://www.access.gpo.gov/nara/cfr/waisidx_00/33cfr154_00.html)

33 CFR 156 - Oil and Hazardous Material Transfer Operations –

[www.access.gpo.gov/nara/cfr/waisidx\\_00/33cfr156\\_00.html](http://www.access.gpo.gov/nara/cfr/waisidx_00/33cfr156_00.html)

29 CFR 1910.106 - Occupational Safety and Health Act (OSHA) --

[www.access.gpo.gov/nara/cfr/waisidx\\_98/29cfr910\\_98.html](http://www.access.gpo.gov/nara/cfr/waisidx_98/29cfr910_98.html)

### **2.1.2 Virginia AST Law and Regulatory Authority**

The 1989 grounding of the Exxon Valdez in Alaska's Prince William sound brought to the nation's attention the environmental devastation that a large release of petroleum can cause. This event, along with a significant release from a Star/Texaco facility in northern Virginia and a pipeline release, impelled the Virginia legislature to promulgate laws aimed at preventing further environmental disasters from petroleum contamination. A series of amendments to State Water Control Law (SWCL), contained in Article 11 of SWCL, **CODE** §§ 62.1-44.34:14 through: 23, provided an emergency fix and contains the statutory authority for the AST Program.

Three regulations emerged from Article 11, as follows:

- VR 680-14-07 (codified as 9 VAC 25-90-10- et seq.)  
Oil Discharge Contingency Plans and Administrative Fees for Approval  
Adopted: December 9, 1991  
Effective: January 29, 1992  
Repealed: June 24, 1998
- VR 680-14-13 (codified as 9 VAC 25-140-10 et seq.)  
Aboveground Storage Tanks Pollution Prevention Requirements  
Adopted: May 10, 1993  
Effective: June 30, 1993  
Repealed: June 24, 1998

- VR 680-14-12 (codified as 9 VAC 25-130-10 et seq.)  
The Facility and Aboveground Storage Tank Registration Requirements  
 Adopted: June 28, 1993  
 Effective: September 22, 1993  
 Repealed: June 24, 1998

Amendments to the law continued, which mandated changes to the AST regulations. To implement statutory amendments and to enhance consistency and clarity in the AST regulations, the State Water Control Board adopted a new regulation that consolidated and updated the three regulations listed above. The Facility and Aboveground Storage Tank (AST) Regulation, 9 VAC 25-91-10 et seq., became effective June 24, 1998. Additionally, the State Water Control Board adopted the Aboveground Storage Tank and Pipeline Facility Financial Responsibility Requirements Regulation, 9 VAC 25-640-10 et seq., which became effective March 2, 2001.

Appendix IA contains instructions for accessing electronic copies of the AST statutes and regulations discussed in this section.

Other state laws that apply to ASTs are contained in the statewide building and fire codes, which local code officials administer. These codes can be reviewed or purchased at the following web sites:

State Building Codes - BOCA chapter 23 & 32 –  
[www.vbcoa.org](http://www.vbcoa.org)  
<http://www.bocai.org/>

Fire Codes – NFPA 30 & 30A –  
[www.nfpa.org](http://www.nfpa.org)

## 2.2 USTs

### 2.2.1 Federal UST Law and Regulations

By the early 1980s, millions of UST systems in the United States were currently or had been used to store petroleum and other substances. Many of those had leaked or were believed to be leaking, posing a serious threat to the nation's groundwater. That threat to groundwater, along with other health and safety concerns, prompted Congress to add Subtitle I to the already existing Resource Conservation and Recovery Act (RCRA) [42 U.S.C. § 6991 et seq.]. Subtitle I became effective on **November 8, 1984**. An electronic copy of this statute can be obtained at <http://www.epa.gov/epahome/laws.htm>.

While the implementing regulations for Subtitle I were under development, EPA instituted an Interim Prohibition (effective **May 8, 1985**) that prohibited the installation of any

underground tanks and lines that were not corrosion protected, structurally sound, and compatible with the substances stored. The final UST regulation, Technical Standards and Corrective Action Requirements for Owners and Operators of USTs, 40 C.F.R. Part 280, became effective on **December 22, 1988**. This regulation is available at [http://www.access.gpo.gov/nara/cfr/waisidx\\_00/40cfr280\\_00.html](http://www.access.gpo.gov/nara/cfr/waisidx_00/40cfr280_00.html).

### **2.2.2 Virginia UST Law and Regulations**

Virginia amended its State Water Control Law to incorporate the requirements of RCRA Subtitle I by adding Article 9 (**CODE** §§ 62.1-44.34:8 through: 9) and Article 10 (**CODE** §§ 62.1-44.34:10 through :13).

The State Water Control Board subsequently promulgated two regulations: the UST Technical Standards and Corrective Action Requirements Regulation, 9 VAC 25-580-10 et seq., (the “UST Technical Regulation”), and the Petroleum UST Financial Responsibility Requirements Regulation, 9 VAC 25-590-10 et seq., (the “UST Financial Responsibility Regulation”).

The UST Technical Regulation governs UST installation, performance standards, operation, closure, release reporting, assessment, and corrective action. It became effective on October 25, 1989, and is currently being amended to incorporate statutory amendments that have occurred since that time.

The UST Financial Responsibility Regulation requires UST owners and operators to demonstrate their ability to pay for the cost of corrective action and third party bodily injury and property damage resulting from a UST release. The effective date of the regulation was May 8, 1990. It has been amended twice. The last amendment became effective on September 3, 1998.

Appendix IA contains instructions for accessing electronic copies of the UST statutes and regulations discussed in this section.

### **2.2.3 Key UST Program Dates**

Because federal and state government have regulated USTs for some time (almost two decades), the following chronology of key legal and regulatory developments may prove helpful to compliance staff:

- 11/8/84 - Federal UST Law (Subtitle I of RCRA) effective
- 5/8/85 - Federal UST Interim Prohibition in effect (only corrosion proof tanks/piping may be installed)
- 5/8/86 - Federal UST Notification due to state implementing agencies on federal notification form

- 7/1/87 - Virginia UST Laws (Article 9 of State Water Control Law) effective
- 12/22/88 - Federal UST Technical Regulation effective  
Start date for ten year phase-in of UST upgrade requirements for spill and overfill prevention and corrosion protection
- 10/25/89 - Virginia UST Technical Regulation effective
- 12/22/89 - Start date for five year phase-in for UST Release Detection requirements based on tank age
- 12/22/93 - End of five year phase-in for UST Release Detection requirements based on tank age
- 7/1/96 - State law amended to rescind regulation of heating oil USTs
- 12/22/98 - End of ten year phase-in of UST upgrade requirements for spill and overfill prevention and corrosion protection.

#### **2.2.4 Differences Between the Federal and the Virginia UST Regulations**

The Virginia regulations substantially duplicate the federal UST regulations in terms of UST operating and technical standard requirements. However, there are several minor areas where Virginia's UST regulatory structure is either more stringent than, or is implemented slightly differently from, the federal UST regulations. These differences are summarized in the paragraphs below.

- Virginia does not permit the installation of a regulated UST system without corrosion protection under any circumstances. The federal regulation permits regulated UST systems to be installed without corrosion protection in cases where a corrosion expert has determined that the site is not corrosive enough to cause the system to have a release due to corrosion during its operating life.
- The state UST Technical Regulation requires tank owners/operators to show that they have complied with the Uniform Statewide Building Code (USBC) by obtaining a permit issued by the local code official and any required inspections for UST installation, upgrade, repair, or closure. The federal regulation has no corresponding requirement.
- Virginia requires that UST systems with impressed current corrosion protection systems be installed so that they cannot inadvertently be shut off. The federal regulation simply mandates continuous corrosion protection.

- Virginia UST owners and operators generally must obtain a permit (i.e., an approved Corrective Action Plan) from DEQ before conducting Corrective Action to remediate a spill. EPA does not require these permits.
- For a change in service or closure of an UST, Virginia owners and operators must take soil samples, submit test results from those samples, describe the area where the samples were taken, and prepare a site map. DEQ uses this information to determine whether any significant release occurred while the tank was in use. The federal regulations do not specifically require soil sampling.
- Virginia's UST Financial Responsibility Regulation allows tank owners and operators to use the Virginia Petroleum Storage Tank Fund (VPSTF) as a means for meeting most of their \$1Million/\$2Million federal financial demonstration requirement. There is no corresponding federal fund and no provision in the federal regulation that requires the EPA to accept state Funds like the VPSTF as a demonstration mechanism. (Most states do have such Funds, and EPA accepts them unless the Fund proves to be insolvent.) Thus far, EPA has accepted the VPSTF as suitable demonstration of an operator's financial responsibility for the amount above that operator's VPSTF sliding scale financial responsibility requirement.
- In the Virginia regulations, the definition of "regulated substance" is broader than the one in the federal regulation because Virginia includes "any element, compound, mixture, solution, or substance which, when released into the environment, may present substantial danger to the public health or welfare" while the federal definition for "regulated substance" includes "petroleum" and only those specifically CERCLA listed substances.

Although this could be interpreted as a very substantial difference in the two regulations, in its actual practice DEQ uses the federal definition. Because the State definition is so broad, it could be interpreted to include any substance. Because such an interpretation would make the regulation and the program unmanageable and does not appear to be consistent with the intent of the legislature, the UST Program regulates only petroleum and CERCLA listed products.

- The Virginia UST regulation requires owners to submit notifications for any known USTs, even if the tank is no longer in use, but remains in the ground. The federal regulation requires that owners/operators register any tank that was in the ground on or after May 8, 1986 unless the tank was out of operation on or before January 1, 1974.

### **2.2.5 UST Program Delegation**

Under federal law and regulation, it is permissible for the United States Environmental Protection Agency to delegate program administration for federal environmental regulatory programs. EPA delegated the UST Program to Virginia, effective October 28, 1998, through a process called "State Program Approval." This approval allows DEQ to enforce the federal regulations for EPA. Generally, EPA will defer enforcement of the federal UST regulations in favor of Virginia's enforcement of the state UST regulations.

However, EPA still retains oversight jurisdiction for the Virginia UST Program and may conduct inspections and enforce the federal UST regulations in Virginia if it decides to do so.





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## **APPENDIX A**

### **WEB INSTRUCTIONS FOR ACCESSING STATE AST AND UST STATUTES AND REGULATIONS**

**To access AST and UST statutes, go to:**

<http://legis.state.va.us/codecomm/codehome.htm>

Select Code of Virginia

Select *Table of Contents*

Select Title 62.1

Select Chapter 3.1

For Article 9, select 44.34:8 and :9

For Article 10, select 44.34:10 through :13

For Article 11, select 44.34:14 through:23

**To access AST and UST regulations, go to:**

<http://legis.state.va.us/codecomm/codehome.htm>

Select Virginia Administrative Code

Select *Table of Contents*

Select Title 9

Select Agency 25

For the Facility and AST Regulation, select Chapter 91

For the UST Technical Regulation, select Chapter 580

For the UST Financial Regulation, select Chapter 590

For the AST and Pipeline Facility Financial Regulation, select Chapter 640



# STORAGE TANK PROGRAM COMPLIANCE MANUAL

## VOLUME II REGISTRATION & CLOSURE

(October 12, 2001)



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## **1. UST Registration    *UNDER DEVELOPMENT***

## **2. AST Registration    *UNDER DEVELOPMENT***

## **3. UST Closure**

### **3.1    Statutory and Regulatory Interpretations    *UNDER DEVELOPMENT***

### **3.2    Program Requirements    *UNDER DEVELOPMENT***

### **3.3    UST Closure and Change in Service Review Process**

The following procedures were developed to aid DEQ staff in the accurate and efficient review of closure reports for UST systems. Regional office staff is responsible for the review of all closure documentation, specified sections of the UST Notification Form (7530-1), and for sending letters to the regulated community notifying them of the status of their closure report.

It is anticipated that a CEDS module will be developed to enable regional staff to consistently track closure projects. Interim closure tracking mechanisms may already exist in the regions. Therefore, this document does not address the tracking of closure projects.

#### **3.3.1    Routing**

Closure reports are received in the regional offices as well as central office<sup>1</sup>. If closure reports are received in central office they will be scanned to verify they are closures. Then all original documents including the original 7530-1 will be forwarded to the region for review. No data entry will be performed at this point in the review process by central office. All original closure documentation, including the 7530-1, will be maintained in the region until the review is complete and deficient items are identified. Once it is determined that the 7530-1 is complete, the original 7530-1 may be forwarded to central office for data entry (even though assessment deficiencies may remain) and a copy made for the regional files. This routing process was developed to allow regional office staff to complete their review of the closure report and address deficiencies in the 7530-1 before central office staff performs data entry duties.

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<sup>1</sup> The regional office also receives 7530-1 forms for amended and new facilities. Regional office staff are primarily responsible for the review of 7530-1 forms and assessment information for closures only. 7530-1 forms for new and amended facilities may be forwarded to central office without review. The central office is responsible for the review of these forms prior to data entry.

### 3.3.2 Initial Screening

If it is not possible to perform a complete closure report review upon receipt, the report should be initially reviewed for evidence of a possible release. If the closure report contains evidence of a possible release, the CEDS remediation module should be checked to see if a Pollution Complaint (PC) number has been issued, and a PC number issued accordingly.

### 3.3.3 Closure Review

#### UST Notification Forms

UST closure reports should include a complete 7530-1 and assessment documentation. The 7530-1 must be in ink or typed (if typed the signature must be in ink) to be acceptable. Though all sections of the 7530-1 are important and should contain complete information, the following sections contain the minimum information needed to maintain the CEDS database with accuracy:

- Section I - Owner Name and Address
- Section II - Facility Name and Address
- Section VIII - Signature<sup>2</sup>
- Section IX - Tank Size and Substance Stored (best estimate)
- Section X - All of part 1

Once the 7530-1 is reviewed for completeness, it should be compared to the CEDS registration database and regional files. If any errors or omissions are noted, a copy of the 7530-1 should be mailed to the owner with deficient sections highlighted for correction. In this manner, the original 7530-1 will be retained in the regional files until all deficient items are addressed. The owner should sign, and date, the 7530-1 above the copied signature and date to validate changes made to the form.

#### UST Closure Assessments

Some regions may already have procedures for the review of assessment components. Therefore, the UST Closure Report Review Checklist (*Attachment 1*) is provided for guidance and may, or may not be, used in all regions.

The assessment portion of the closure report should contain the following items (also indicated on the DEQ UST Closure Fact Sheet):

- a site map containing all UST system components, sample depths, and exact locations of each sample
- soil and/or water sample results

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<sup>2</sup> The owner or the owner's authorized representative must sign the 7530-1. Where the owner is an individual, then the signature must be that of the owner or the attorney-in-fact of the owner. The attorney-in-fact is the person authorized via a power of attorney to act on behalf of the owner. Where the owner is an entity other than an individual, then the signature is acceptable from an officer of director (for corporations), partner (for partnerships), member (for limited liability companies) or employee of the owner.

Samples may not be required for UST closure if acceptable leak detection records can be obtained (e.g. vapor monitoring records, ground water monitoring records) that indicate a release has not occurred.

Samples must be collected for tanks, lines, and dispensers.

Samples must be analyzed using an approved laboratory method.

- chain of custody sheets
- a copy of the building permit
- copies of applicable disposal manifests

### **3.3.4 Closure Report Correspondence**

After a complete review of the closure report, correspondence in the form of a letter may be sent to the owner notifying them of the status of their closure report. Deficiencies will be handled as an enforcement/compliance concern at the regional level.

### **3.3.5 Approval Letter**

If there are no deficient items found during the review of the 7530-1 and closure report and it is determined that no additional site characterization is needed, a letter may be sent to the owner stating no further action is necessary. A copy of the approval letter and the original 7530-1 should be forwarded to the central office at this time.

*Attachment 2* is a boilerplate letter, which may be used in this situation.

### **3.3.6 Deficiency Letter**

If it is determined that relevant sections of the 7530-1 or assessment components are deficient, a letter may be sent to the owner requesting these items. Once all deficient items are submitted an approval letter may be sent to the owner stating no further action is necessary, as described in 1.4.1.

*Attachment 3* is a boilerplate letter, which may be used in this situation.

### **3.3.7 Unregulated Closure Letter**

In some instances DEQ receives closure reports for unregulated UST systems for review. Since unregulated tank closure documents are generally not retained within agency files, the document may either be returned to the tank owner, or the tank owner should be notified that the closure documents will be discarded. *Attachment 4* is a boilerplate letter which may be used in this situation.

## **4. AST Closure Review *UNDER DEVELOPMENT***

## UST CLOSURE REPORT REVIEW PROGRESS CHECKLIST

Site Name \_\_\_\_\_ Facility ID \_\_\_\_\_

Date closure report was received. \_\_\_\_\_

☐ Closure information has been entered/updated in the regional database.

☐ Cursory review of closure indicated a release has / has not occurred.

☐ A PC number related to this closure was previously issued

☐ No PC number was previously issued. Closure report routed to \_\_\_\_\_ on: \_\_\_\_\_

Date closure report was reviewed: \_\_\_\_\_

☐ 1. Appropriate number of tank, line, and pump island samples were taken.

☐ 2. Appropriate analytical methods were used at each sample location.

☐ 3. A moisture sample was taken for each sample point (optional).

☐ 4. Chain of custody and analysis sheets were provided, and sample locations on the site map did concur with the chain of custody and analysis sheets.

☐ 5. Holding times were not exceeded.

☐ 6. Site map was checked to ensure that sample locations and depths were properly identified on the map.

☐ 7. 7530-1 form, site map, and report were reviewed to ensure tank numbers and other information correspond.

☐ 8. Building permit was provided.

☐ 9. In place closure was approved by the local building official.

☐ 10. Tank disposal manifests were provided.

☐ 11. Soil disposal manifests were provided, where applicable.

☐ 12. Comparison of tank information on the 7530-1 form with CEDS was completed.

☐ Letter was sent regarding missing site assessment components.

☐ Letter was sent stating no further action necessary.

☐ Letter was sent stating a release may have occurred at this site and closure report has been forwarded to DEQ remediation staff for further review.

☐ Closure information and a copy of the 7530-1 form was retained in the regional facility file.

☐ Original 7530-1 form was forwarded to OSRR on \_\_\_\_\_.

[Date]

«SurName» «FName» «LName» «Suffix»  
«Title»  
«Company»  
«MAdd»  
«TownState» «Zip»

Re: Underground Storage Tank (UST) Closure and Environmental Assessment for «SName»  
Facility Identification (FAC ID No.): **«FCID»**

Dear «SurName» «LName»:

Thank you for providing the UST closure report and notification form for the above referenced facility to the Department of Environmental Quality (DEQ) on **DATE**.

Based upon a review of the assessment information contained in the report, the DEQ believes that contamination levels at this site do not warrant further investigation. Should future environmental problems occur, which the DEQ determines are related to this site, additional investigation and corrective action may be required in accordance with State Law.

Your original notification form has been forwarded to the DEQ's Central Office. The Central Office staff will amend the agency's tank registration database to indicate the tank(s) as closed. A copy of the notification form and the original closure assessment report will be placed into our regional facility file for this site

If you have any questions regarding this matter, please contact me at (###) ###-####.

Sincerely,

Staff Name  
Title

pc: facility file  
SRR

[Date]

«SurName» «FName» «LName»  
«Company»  
«MAdd»  
«TownState» «Zip»

Re: Underground Storage Tank (UST) Closure and Environmental Assessment for «SName»  
Facility Identification (FAC ID) No: «FCID»

Dear «SurName» «LName»:

Thank you for providing the UST closure report and notification form for the above referenced facility to the Department of Environmental Quality (DEQ) on **DATE**.

Based on a review of the information by DEQ staff, the following item(s) must be addressed before the above site can be closed in accordance with Regulation 9 VAC 25-580-320:

*List items found to be deficient from closure report review.*

Please submit the requested documentation on, or before, **DUE DATE**.

If you would like to discuss these requirements, do not hesitate to contact me at (###) ###-####.

Sincerely,

Staff Name  
Title

pc: facility file

[Date]

«SurName» «FName» «LName» «Suffix»  
«Title»  
«Company»  
«MAdd»  
«TownState» «Zip»

Re: Unregulated Underground Storage Tank (UST) Closure and Environmental Assessment for  
«SName»

Dear «SurName» «LName»:

Thank you for providing the UST closure report and notification form for the above referenced facility to the Department of Environmental Quality (DEQ) on **DATE**.

Based upon a review of the assessment information contained in the report, the DEQ believes that contamination levels at this site do not warrant further investigation. Should future environmental problems occur, which the DEQ determines are related to this site, additional investigation and corrective action may be required in accordance with State Law.

*Insert one of the following paragraphs:*

(a) DEQ does not retain documents pertaining to unregulated UST systems. Therefore, your original closure report and notification form is being returned to you. DEQ advises you to retain this document in your files for future reference.

(b) DEQ does not retain documents pertaining to unregulated UST systems. If you would like your closure documents returned to you, please notify DEQ by **(DATE)**. The agency will discard these documents if no response is received by the date given.

If you have any questions regarding this matter, please contact me at (###) ###-####.

Sincerely,

Staff Name  
Title

Staff

Initials





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# STORAGE TANK PROGRAM COMPLIANCE MANUAL

## VOLUME III UNDERGROUND STORAGE TANK POLLUTION PREVENTION

(October 12, 2001)



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# **1. Types of UST Inspections**

The following is a summary of the three methods (site visits, informal, and formal) of inspection DEQ uses to implement the regulatory requirements of the UST program. The Regional Director will determine the number and type of inspections to be conducted annually by each Regional Office. More detailed descriptions of how each type of inspection is conducted are located in the following sections of this manual.

## **1.1 Site Visits**

### **1.1.1 Purpose**

The purpose of site visits is to conduct outreach to members of the regulated community. Because the activities normally conducted during site visits may be completed quickly, site visits provide a method for educating a large segment of the regulated community within a short time.

### **1.1.2 Activities Conducted**

The activities listed below are not mandatory. The types of activities conducted in a site visit are selected at the discretion of the inspector pursuant to the guidance of Regional Office management. Site visits may be used to:

- a. Introduce DEQ to the facility owner/operator;
- b. Perform a summary review of the facility to determine whether the facility is registered correctly and verify the tank information listed on the Form 7530;
- c. Provide educational literature to and discuss program requirements with the facility owner/operator; and/or,
- d. Gather the observations necessary to determine whether an informal or a formal inspection should be conducted at a later time.

## **1.2 Informal Inspections**

### **1.2.1 Purpose**

The purpose of informal inspections is to provide an intermediate level of facility review. Although educating facility owners/operators constitutes an important component of informal inspections, informal inspections also provide a method for DEQ to document facility compliance and/or noncompliance in a standardized manner. Informal inspections provide an opportunity for inspectors to meet with facility personnel to discuss basic UST requirements, including spill prevention, overfill prevention, tank and pipe corrosion protection, and tank and pipe release detection. The inspector reviews the facility's compliance with these requirements through interviews with facility personnel, visual verification (if possible), and records review.

### **1.2.2 Activities Conducted**

The activities listed below are mandatory. To the extent that activities beyond those listed below can be conducted with the consent of the facility owner/operator, such additional activities may be performed as part of an informal inspection, but are not required. At a minimum, to conduct informal inspections, inspectors will:

- a. Interview the facility personnel to complete the first three pages of the Inspection

Checklist;

- b. Perform visual verification of the information the facility personnel provides to the extent that such verification does not require removal of manhole covers (checking for spill, overfill, corrosion protection and release detection);
- c. Discuss with the facility personnel and/or the owner/operator a schedule for remedying noncompliance issues discovered during the informal inspection (via a compliance or warning letter);
- d. Where substantial noncompliance is documented, notify the owner/operator that a formal inspection will be conducted within the next year. At this point in the program, substantial noncompliance is defined to mean the failure of the owner/operator to: (i) file an accurate current notification form (Form 7530 signed by owner at time of inspection); (ii) demonstrate financial assurance (owner must present inspector with any evidence of FR to comply), or (iii) to install release detection, spill prevention, overfill prevention, and/or corrosion protection in accordance with the requirements of the UST Technical Regulation.

## **1.3 Formal Inspections**

### **1.3.1 Purpose**

The purpose of formal inspections is to provide a complete facility compliance review. As with other types of DEQ inspections, educating facility owners/operators constitutes an important component of the inspection process. Additionally, formal inspections provide a method for DEQ to document facility compliance and/or noncompliance in a detailed, standardized manner. Formal inspections provide an opportunity for inspectors to verify facility compliance with all requirements applicable to both active and closed tanks, including record-keeping and financial responsibility requirements.

### **1.3.2 Activities Conducted**

The activities listed below are mandatory. To conduct formal inspections, DEQ inspectors will:

- a. Provide advance written notice of the formal inspection to the facility owner or operator (if you are unable to locate the owner);
- b. Perform visual verification of the information required to complete the full Inspection Checklist;
- c. Require the owner/operator to remove manhole, tank, or dispenser covers, and demonstrate all equipment (ATGs, etc.) performs as needed to verify compliance;
- d. Perform a complete records review as required in the Inspection Checklist;
- e. Discuss with the facility personnel and/or owner/operator a schedule for remedying noncompliance issues discovered during the inspection; and,
- f. Document any apparent noncompliance issue and notify the owner/operator of the potential for enforcement action according to the procedures in the DEQ enforcement manual.



## **2. Pre-Inspection Procedures**

### **2.1 Pre-Inspection Procedures Common to All Types of UST Inspections**

#### **2.1.1 Obtain Training**

##### **2.1.1.1 Review Educational Literature**

Inspectors and trainees must review and familiarize themselves with the law and regulations which the inspector will be implementing and the educational literature which the inspector will be providing to facility owners/operators. Appendix A identifies the law, regulations and literature that the inspector trainees must review.

##### **2.1.1.2 Complete Regional Office UST Inspector Training**

###### **Safety**

Each Regional Office will conduct OSHA and safety-related training for inspectors of UST facilities. Each inspector will be required to complete this training before conducting any inspection. Safety training topics will include those listed in Appendix B.

###### **Field Training**

To ensure inspector trainees learn how to identify equipment, learn proper equipment operating procedures, and gain experience in the interpretation of demonstrations and tests, each Regional Office will conduct field training.

###### **Records Training**

To ensure inspector trainees can determine when supporting records are required for UST compliance and whether required supporting records are complete and accurate, each Regional Office will conduct records review training.

###### **Inspector Mentoring**

Part of an inspector's training may include a period of mentoring, in which the trainee accompanies an experienced inspector on site visits and inspections until the trainee is prepared to conduct site visits and inspections independently.

#### **2.1.2 Obtain Equipment and Materials**

- a. Mandatory Equipment and Materials for ALL UST Inspections - Appendix C contains a list of the Equipment and Materials for all UST Inspections. Each inspector must have an adequate supply of equipment and materials available prior to conducting the inspection.
- b. Training and Educational Materials Required for All Inspections - Appendix A contains a list of the regulations and educational literature pertaining to the UST program. Each inspector should maintain an adequate supply of copies of these regulations and educational materials to provide to facility owners/operators during inspections or as soon after the inspection as possible.

### **2.2 Site Visits**

In addition to the pre-inspection procedures set out in subsection 2.1 of this part, before a site visit, each inspector should obtain notification records from STORMS and review these records before the inspection to become familiar with the facility's background. (Additional records such as

LUST/Pollution Complaint files and supporting documentation for closure notifications may be reviewed at the discretion of the Regional Office management.)

## **2.3 Informal Inspections**

In addition to the pre-inspection procedures set out in subsection 2.1 of this part, each inspector should obtain notification records from STORMS and review these records before the inspection to become familiar with the facility's background. (Additional records such as LUST/Pollution Complaint files and supporting documentation for closure notifications may be reviewed at the discretion of the Regional Office management.)

## **2.4 Formal Inspections**

In addition to the pre-inspection procedures set out in subsection 2.1 of this part, the following pre-inspection procedures also apply:

### **2.4.1 Review STORMS Registration/Notification Records**

Each inspector must obtain notification records from STORMS and review these records before the inspection to become familiar with the facility's background. (Additional records such as LUST/Pollution Complaint files and supporting documentation for closure notifications may be reviewed at the discretion of the Regional Office management.)

### **2.4.2 Written Notification of Formal Inspection**

Before performing a formal inspection, the inspector must send by regular mail written notice of the planned inspection at least thirty days (or more) to the UST owner listed on Form 7530 (STORMS) before the date the inspection will occur. Regional office management is provided the flexibility in the Formal Inspection Notification Letter (Appendix D) to either: (1) establish a certain date for the inspection at least thirty days prior, or; (2) mail notice letters in advance (more than 30 days) and follow up by telephone to set a convenient time for the inspection. A courtesy telephone call to the owner prior to sending the notification letter may be made at the discretion of the regional office management. The inspector may schedule the inspection in less than thirty days from the date of the notice if a shorter timeframe is mutually agreeable. The purpose of the written notification is to ensure that the owner/operator has adequate time to (i) make copies of requested records and (ii) ensure personnel with knowledge of the equipment and operations are present for the inspection. Appendix D contains the form notification letter.

## **3. Inspection Procedures**

### **3.1 Instructions Applicable to All Inspections**

#### **3.1.1 Acceptable Inspection Technique**

Inspectors must ensure that the actions the inspectors undertake at a facility do not create a hazardous situation or result in damage to the facility. Therefore, the verification methods contained in the inspection procedures, which follow, are limited to interview and visual examination techniques. A basic principle of acceptable inspection technique is that any verification requiring demonstrations (e.g., use of the equipment, probing to show equipment is intact) must be performed by the site contact.

### **3.1.2 Discrepancies Between STORMS Information and Inspection Observations**

If comparison of registration data on file with the agency (whether or not STORMS entry has been completed) with the information discovered during the inspection suggests that the notification form is inaccurate, the inspector should note the need for a notification amendment in the applicable Comments section.

### **3.1.3 Improper Installation**

If the inspector notes that required equipment for a tank and/or piping is present but is incorrectly maintained, operated, or installed, then the inspector should make a note to that effect in the applicable Comments section. Incorrect maintenance, operation, or installation will result in noncompliance for the equipment in question.

## **3.2 Site Visits**

Each Regional Office may determine the types of activities conducted during a site visit. These activities may include:

- a. Introduce DEQ to the facility owner/operator;
- b. Perform a summary review of the facility to determine whether the facility is registered correctly;
- c. Provide educational literature to and discuss program requirements with the facility owner/operator; and/or,
- d. Gather the information necessary to determine whether an informal or formal inspection should be conducted at a later time.

## **3.3 Informal Inspections**

To conduct an informal inspection, the inspector must (i) interview the facility personnel to complete the first three pages (Sections I through III and Section VII if there are closed USTs) of the Inspection Checklist; (ii) perform visual verification of the information the facility personnel provides to the extent that such verification requires neither removal of manhole covers nor review of supporting records<sup>1</sup>; and (iii) discuss with the facility personnel and/or the owner/operator a schedule for remedying noncompliance issues discovered during the informal inspection. Detailed instructions regarding the review necessary to complete the first three pages of the Inspection Checklist follow. Completion of the following items is mandatory, unless the instructions specifically state that the item is optional.

### **3.3.1 Section I - Inspection Checklist (See Appendix E) - General Facility Information**

#### **Tracking Parameters**

**(Whenever STORMS data is used to verify equipment, list this in the appropriate comments section.)**

#### **Inspection Type**

---

<sup>1</sup> If the site contact is willing and able to remove covers (fill port and sump covers), then visual verification may be conducted; however, failure of the site contact to perform such activity should not necessarily result in a conclusion of potential noncompliance.

The inspector must check the box to the left of the word "Informal" to note that the Inspection Checklist is documenting the results of an informal, rather than a formal, inspection.

**Facility ID #**

The inspector must enter the facility identification number from STORMS for the facility being inspected. For facilities which have not been registered with DEQ, the inspector must provide the facility owner with an UST notification form (Form 7530-1) and require the owner to complete the form as part of the owner's schedule for remedying noncompliance.

The inspector should resolve inconsistencies and/or ambiguities that exist in the notification records for a facility as part of the informal inspection, such that the most recent notification form filed with DEQ is correct and complete.

**Inspector**

The inspector must enter legibly the inspector's first and last name to ensure that the identity of the inspector can be ascertained for compliance and enforcement follow-up.

**Inspection Date**

The inspector must enter the date the facility inspection occurs in month, day, and year order (MM/DD/YY).

**General Facility Information****Number of regulated USTs at facility (Total #)**

An important goal of all inspections is to determine the true number of USTs at a facility. To determine the number of USTs at a facility, the inspector should interview facility personnel. To verify the information that the facility personnel provide, the inspector should note the number of vent pipes, fill ports, dispensers, and tank fields.

It is important for the inspector to be aware of the limitations of these verification measures. A one-to-one relationship between the number of vent pipes, fill ports, and dispensers and the number of USTs is not always a given. For example, some facilities may have only one vent pipe, only one fill port, and only one dispenser for two or more tanks because the tank system has been manifolded. In contrast, other facilities may have one vent pipe, one fill port, and one dispenser per tank. The inspector should keep in mind that unregulated USTs also have vent pipes, fill ports, and dispensers. The facility personnel's explanations of the relationship between the number of vent pipes, fill ports, dispensers, and tank fields should be consistent with the number of tanks the facility personnel report to you.

If the inspector has reviewed the STORMS data before conducting the informal inspection, the inspector must ask facility personnel to explain any discrepancies between the STORMS data and either the interview data or field observations. If the inspector conducts the STORMS review after the inspection, the inspector must obtain an explanation of any discrepancy as part of the inspection follow up.

The inspector must enter the total number of regulated USTs, including active, permanently closed, and temporarily closed USTs. The total should include partially deferred USTs (USTs which store fuel for use by emergency power generators) and deferred USTs (e.g., airport hydrant fueling systems and field-constructed tanks). Exempt and excluded USTs should not be counted in the total. The sum of the # in use, # closed in the ground, # temporarily closed, and # out of service but

improperly deactivated must equal the total #. Use a zero (0) for categories where none exist. (Removed tanks, if detected, often require extensive research into when and how they were removed.)

**# in use**

The inspector must enter the number of USTs that are used actively to pump regulated substances in the normal course of business.

**# closed in ground**

The inspector must enter the number of USTs that have been closed (in the ground) properly, according to the requirements of Section VII of the UST Technical Regulation.

**# temporarily closed**

The inspector must enter the number of USTs that have been closed temporarily according to the requirements of Section VII of the UST Technical Regulation.

**# out of service but improperly deactivated**

The inspector must enter the number of USTs that are not in service and which have not been closed (either temporarily or permanently) according the requirements of Section VII of the UST Technical Regulation.

**Facility Name As Currently Posted**

The inspector must enter the name of the facility as it appears on signage or as the current business license attests at the facility.

**Facility Name As Currently Registered**

The inspector must enter the current facility name as reflected in the STORMS database.

**Facility Name As Formerly Registered** (if applicable)

The inspector must enter former facility names if reflected in the STORMS database. Former names may be noted in the STORMS facility name field or comments section of the facility screen.

**Facility Street Address**

The inspector must enter the current 911<sup>2</sup> street address as the inspector confirms it during the inspection. Rural route and box numbers should not be used for this line, unless no 911 address has been assigned to the facility.

**City and Zip**

The inspector must enter the city name and zip code used for the facility's mailing address.

**City/County**

---

<sup>2</sup> A 911 address is a street address established to facilitate emergency service response. A 911 address is composed of a street number and street name, as opposed to a rural route and box number. The 911 address can often be obtained from the Web from sites such as <http://www.whitepages.com> using the facility phone number.

The inspector must enter the name of the city or county where the facility is actually located.

**Phone**

The inspector must enter the area code and telephone number for the facility (as opposed to the owner's business office, which may be different).

**Currently Registered Address**

The inspector must enter the facility address as reflected in the STORMS database.

**Formerly Registered Address**

The inspector must enter former facility addresses if reflected in the STORMS database. Former addresses may be noted in the comments section of the facility screen.

**Current Tank Owner Name**

The inspector must enter the name of the tank owner(s) (which may be different from the facility owner) as reported by facility personnel.

**Owner Address, Including City, State, Zip**

The inspector must enter the mailing address of the person/entity the facility personnel indicate to be the owner (s) of the UST(s).

**Phone**

The inspector must enter the area code and telephone number of the tank owner(s) as reported by facility personnel.

**Facility Contact Onsite During Inspection**

The inspector must enter the name of the facility personnel who acts as the inspection contact.

**Potable Water Source** (optional)

The inspector may check the appropriate blank to indicate whether the drinking water supply for the facility is public water, a deep well or a shallow well. The inspector may determine this information through observations or by questioning the facility contact.

**PC#** (optional)

The inspector may enter PC#'s associated with the facility. The inspector may determine PC#'s associated with the facility by reviewing the PC Number field on the facility screen in the STORMS database and/or by reviewing Regional Office leaking UST records. For older releases, this information may appear in the comment field.

**Fuel Supplier** (optional)

The inspector may enter the current fuel supplier for the facility. The inspector may determine this information by interviewing the facility contact.

**Suspected Release**

The inspector should place a check on this line if observations suggest a release may have occurred or if the facility contact indicates a release may have occurred. If there is a "demonstrated failure"

of a system (i.e., a release caused by overfills and the alarm sounded but no one responded because the alarm is not placed close enough to the filling site), then it can be treated as non-compliance and the owner will be required to reconfigure the system.

**Length of Piping** (optional)

The inspector may enter the length of product piping in feet (often the distance in feet from the tank to the dispenser) for the facility.

### **3.3.2 Section II - Inspection Summary**

Section II of the Inspection Checklist provides a summary of the inspection results, which are noted in more detail in subsequent sections.

**Facility in compliance**

The inspector must check either “yes” or “no” to indicate the overall result of the inspection. The inspector should check “yes” only if the facility appears to be in full compliance with all items required for Inspection Checklist completion.

**Facility being reported to EPA as non-compliant**

When a facility fails to meet the standards for operational compliance, the inspector must check this box. The standards for operational compliance are set out in the Operational Compliance table contained in Appendix F.

**Apparent Noncompliance Issues**

**Registration**

The inspector must conduct a review of the registration of the facility to determine whether the facility's notification documentation complies with all registration requirements. Although a complete review of historic registration information is not required to complete the Inspection Checklist, it will prove helpful for the inspector to understand the origin of the registration requirements in order to determine whether registration for past UST closures was necessary. The timeline<sup>3</sup> for registration requirements is as follows:

Effective May 8, 1986:

---

<sup>3</sup> The dates used as markers in this timeline correspond to the effective dates of federal and state law and regulations. May 8, 1986 is the effective date set out in Section 9002 (Subtitle I) of RCRA. Specifically, the effective date for the noted requirements was “18 months after the date of enactment of the Hazardous and Solid Waste Amendments of 1984”. The date of enactment was November 8, 1984; thus, 18 months following that date was May 8, 1986.

July 1, 1987 was the effective date of Article 9 of State Water Control Law. Virginia Code §62.1-44.34:9(7) added the noted requirement.

December 22, 1988 was the effective date of the federal UST Technical Regulation (40 CFR Part 280).

October 25, 1989 was the effective date of the Virginia UST Technical Regulation.

USTs In Use - For USTs in use on or after January 1, 1974, UST owners and operators were required to file a notification by May 8, 1986.

USTs Newly Installed - On or after May 8, 1986, owners were required to file notifications for new tank installations within thirty days of installation.

Removed USTs - For USTs that were removed before January 1, 1974 no notification was required.

Closed USTs That Remained In Ground - As of May 8, 1986, there were no requirements to file notifications for USTs which were closed before January 1, 1974 but which remained in ground.

Effective July 1, 1987:

Closed USTs Which Remained In Ground - For USTs closed before January 1, 1974, but which remained in the ground as of January 1, 1974, the owner of the property was required to file a notification form if the owner had actual knowledge of the presence of the tanks.

Effective December 22, 1988:

Closed USTs - For USTs closed between May 8, 1986 and December 22, 1988, no notification-filing requirement for closure nor assessment requirements existed. Therefore, failure to have filed such notification for this time period does not constitute noncompliance. For tanks closed between December 22, 1988 and October 25, 1989, tank owners were required to file a notification form documenting closures, but were not required to file building permits, soil samples, or site maps. If a tank was previously mis-registered "currently in use" on or before May 8, 1986, the tank owner must notify DEQ on form 7530 that the tank was actually out of use.

USTs With Change in Service - Tank owners were required to file a notification form documenting changes in service, but were not required to file building permits, soil samples, or site maps.

Effective October 25, 1989:

Closed USTs - Tank owners were required to file a copy of the building permit, soil samples, and site map in addition to the notification form.

USTs With Change in Service - Tank owners were required to file a copy of the building permit, soil samples, and site map in addition to the notification form.

Effective July 1, 1996: All regulated >5,000 gallon capacity heating oil tanks were exempted from regulation by state law amendment. (Closure of such tanks during the October 25, 1989 to July 1, 1996 period required closure documentation.)

a. Not Registered

If a notification form has never been filed for the facility, the inspector must circle "Not Registered."

b. Registration Amendment Required

The inspector must determine whether all USTs currently and previously at the facility have been registered correctly. If at least one notification form has been filed for the facility, but the notification form(s) is(are) in any way incorrect or incomplete, the inspector must circle "Registration Amendment Required." To determine whether the facility notifications are incorrect or incomplete, the inspector must compare the facts available from observation, facility contact



interviews, facility records, and DEQ records against the notification requirements set out above.

c. **Closure Documentation Required**

If the inspector determines that any USTs at the facility have been closed either temporarily or permanently, but the required Form 7530, building permit, soil samples, or site maps, were not filed with DEQ, the inspector must circle "Closure Documentation Required."

**Spill Prevention**

To complete Section III of the Inspection Checklist, the inspector will inspect each active UST at the facility to determine whether spill prevention exists. If any UST that requires spill prevention lacks spill prevention, then the inspector will check the Spill Prevention box in this part of Section II of the Inspection Checklist.

**Overfill Prevention**

To complete Section III of the Inspection Checklist, the inspector will inspect each active UST at the facility to determine whether overfill prevention exists. If any UST which requires overfill prevention lacks overfill prevention, then the inspector will check the Overfill Prevention box in this part of Section II of the Inspection Checklist. If the inspector was not able to perform the observations necessary to make this determination, then the inspector will check this box and indicate the inability to verify Overfill Prevention in the Inspector Comments section.

**Corrosion Protection**

To complete Section III of the Inspection Checklist, the inspector will inspect each active UST system at the facility to determine whether corrosion protection exists. If any UST system that requires corrosion protection lacks corrosion protection, then the inspector will check the Corrosion Protection box in this part of Section II of the Inspection Checklist. Additionally, the inspector will circle "a" if the system is missing corrosion protection for one or more tanks and "b" if the missing corrosion protection pertained to any piping. The inspector will circle "c" if the inspector's observations indicate the owner/operator has failed to operate and maintain the corrosion protection properly. If the inspector was not able to perform the observations necessary to make a determination regarding the compliance of the owner/operator for all tanks, piping and operation/maintenance issues, then the inspector will check the Corrosion Protection box and indicate the inability to verify in the Inspector Comments section.

**Release Detection**

To complete Section III of the Inspection Checklist, the inspector will inspect each active UST system at the facility to determine whether release detection exists for tanks and piping at the facility which require release detection. If the inspection reveals that all active UST systems which require release detection contain release detection, then the inspector will make no marks in this part of Section II. If any tank or piping that requires release detection lacks release detection, or if the inspector's observations suggest the release detection records may not exist, then the inspector will circle "a" if the missing release detection pertained to one or more tanks, and "b" if the missing or malfunctioning release detection pertained to any piping.

**Financial Responsibility (FR) Mechanism**

The inspector should obtain the financial responsibility mechanism from the site contact. If the contact indicates no mechanism exists, the inspector should check the financial responsibility box

under Apparent Noncompliance issues.

The inspector must forward all financial assurance mechanisms to the Office of Financial Assurance (OFA) for review. The OFA Director will report periodically back to the RO on the status of FR reviews and on cases of compliant and non-compliant FA.

### **Owner's expressed intent**

The inspector will discuss plans for the facility with the facility contact. In this part of Section II, the inspector will note whether the facility contact has indicated that any tanks or piping will be upgraded, replaced, or closed. If the facility contact does not know the owner's plans, then the inspector will check the box to the left of "not available." If any other explanation is provided (e.g., owner plans to sell), then the inspector will check the box to the left of "other" and note the explanation in the Inspector Comments section.

### **Inspector Comments/Schedule for completing work**

The inspector will add any clarification that may be helpful concerning the facility inspection. Additionally, if the inspector discovered any apparent noncompliance, the inspector will discuss the owner's plans for remedying the noncompliance and will note the owner's remarks concerning the schedule for completing the compliance activities.

### **Inspector's signature**

The inspector must sign the Inspection Checklist as indicated in Section II.

## **3.3.3 Section III - UST System Description for Active USTs**

Section III of the Inspection Checklist addresses technical requirements for ACTIVE USTs (the same tanks as those counted above under "# in use"). Section VII addresses INACTIVE USTs.

### **General Information**

#### **Tank #**

If available, the inspector should fill in the tank numbers such that the numbers are consistent with the tank numbers listed in STORMS for the facility. If STORMS tank numbers are not available, the inspector should fill in the tank numbers according to the onsite contact's designations. Each compartment of a tank divided into compartments should be noted as a separate tank<sup>4</sup>. Each tank in a manifolded system should be noted as a separate tank<sup>5</sup>.

#### **Date Installed**

If available, the inspector should insert the most accurate date based on the inspection (or date(s) contained in STORMS). If STORMS lacks installation date information, then the inspector should insert information obtained from the site contact. If the inspector becomes aware of differences in installation dates between STORMS and the site contact's information, the inspector must make

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<sup>4</sup> In STORMS, a "C" usually appears behind the tank identification number for compartmentalized tanks.

<sup>5</sup> In STORMS, an "M" usually appears behind the tank identification number for manifolded tanks.

inquiries which resolve the differences and enter the information the inspector believes to be correct on the Inspection Checklist. If only the year of installation is available, it is acceptable for the inspector to omit the month of installation. If the date of installation is unknown, then the inspector should enter "UNK." Because the date of installation determines the necessity for certain compliance requirements, the inspector should request additional information from the owner/operator to determine the installation date as accurately as possible. If the install date is unknown put a note in the comment section as a possible noncompliance issue.

### **Date of Upgrade**

The purpose of entering the date of upgrade of the "tank" for this part of the Inspection Checklist is to allow the inspector to determine whether it is acceptable for the owner to continue to use inventory control (IC) and tank tightness testing (TTT), or manual tank gauging with TTT to meet the release detection requirement. StiP-3 tanks upgraded with impressed current retain the StiP-3 install date as the begin date for the 10 year period. The inspector must determine from site observations whether the upgrade actually has occurred. If a disparity exists between STORMS information and the site observations, the inspector should enter the most accurate information in the Date of Upgrade blank. If only the year of upgrade is available, it is acceptable for the inspector to omit the month of upgrade. If the date of upgrade is unknown, then the inspector should enter "UNK."

### **Tank Capacity**

STORMS may contain information regarding the tank storage capacity. The inspector must determine from the interview of the site contact and onsite observations whether information reported in STORMS appears to be correct. If any disparity exists between STORMS information and the interview or observation information, then the inspector should enter the most accurate information in the tank capacity blank(s). Accurate tank capacity information is critical because compliance requirements may differ according to tank size.

### **Substance Stored**

For tanks currently containing product, the substance stored in the UST on the date the inspection is conducted should be entered on this line. For tanks not currently containing product, the substance last stored should be entered. The choice of substances includes:

- gasoline (unleaded, plus, premium);
- diesel;
- gasohol;
- kerosene;
- heating oil;
- used oil;
- other;
- hazardous substance; and
- mixture.

Where the substance is "other," "hazardous substance," or "mixture," the inspector must specify the substance(s).

Where there is confusion between diesel and heating oil, the product is considered heating oil where it is used on the premises either for heating or a manufacturing process. Such tanks should not be included on the checklist, as the tank, when containing product used in this manner, is not

regulated. If the product is used in a motor engine or for emergency power generation, then the inspector should list the product as diesel. If the product is heating oil offered for resale, then the inspector should list "heating oil" in the checklist.

### **Fill ports marked?**

The inspector should visually examine each fill port to determine whether the fill port is marked properly by either API 1637 color coding; or, stamping/applying product name to the fixed portion of the fill assembly, or both. If the tank's fill port is properly marked the inspector should circle "yes." If the fill port is not properly marked, the inspector should circle "no." A fill port is properly marked when it identifies the substance stored according to industry standards. To assist inspectors, the following are commonly encountered fill port color markings:

- gasoline: white, red, blue
- gasohol: gold
- diesel: yellow or green
- kerosene: brown

### **Spill Prevention**

All regulated USTs (including remote fills) that accept more than twenty-five gallons of regulated substance at transfer are required to have a spill containment device. Spill containment devices are usually buckets or basins that are sealed around the fill port. Common names for spill containment devices include "spill buckets," "spill containment manholes," or "catchment basins."

Spill containment devices are designed to catch small amounts (three to five gallons) of product after delivery from tanker trucks. Some spill containment devices may have either a pump or a plug that transfer spilled product into the fill pipe. Other spill containment devices lack a pump or plug and must be manually emptied.

After the site contact removes the manhole cover that is over the fill port, the inspector may determine whether a spill containment device is present by visual examination. If the inspector's visual examination demonstrates that the structure surrounding the fill port has intact walls and a bottom, rather than being exposed soil or gravel, then a spill containment device is presumed to exist.

If it is not possible for the inspector to see the bottom of the structure surrounding the fill port, the inspector may not perform any physical examination of the structure surrounding the fill port. Instead, the inspector must request that the site contact demonstrate that the structure surrounding the fill port has walls and a bottom. This demonstration may include the use of a probe to show to the inspector's satisfaction that the structure surrounding the fill port is sealed. Other methods acceptable to the inspector may be used. If the site contact refuses to perform such demonstration, the inspector should make a note of the refusal in the Comments section and ensure that the demonstration is again requested in any future formal inspection.

The inspector should check "Not Required" if transfers to the tank in question are always less than twenty-five gallons. If any transfers greater than twenty-five gallons occur for the tank in question, then the inspector should NOT check "Not Required." Rather, the inspector then must note whether the tank has a spill containment device. If the tank has a spill containment device, then the inspector should check the box on the "Spill Containment Device" line for the tank in question. If the tank lacks a spill containment device or has a spill containment device which appears to be leaking or not functioning properly, the inspector should NOT check the box on the "Spill Containment Device" line and must make a note of the observed noncompliance in the Comments

section. Water/product in the spill bucket does not make it non-compliant (it's an indication the bucket works), but the water/product should be removed for the bucket to meet the manufacturer's design capacity. Owners need to demonstrate that a bottom exists on questionable systems. Spill devices with no bottom or holes/slits in the container are non-compliant. Concrete containment is acceptable if it is coated to not leak. If a spill device cannot be seen then it is non-compliant.

### **Overfill Prevention**

All regulated USTs which accept more than twenty-five gallons of regulated substance at transfer are required to have an overfill prevention device. The purpose of overfill prevention devices is to prevent USTs from being overfilled during a delivery from a tanker truck. Overfill prevention must: (i) automatically shut off flow into the tank when the tank is no more than 95% full; (ii) alert the transfer operator when the tank is no more than 90% full by restricting the flow into the tank or triggering a high level alarm; or, (iii) restrict flow 30 minutes prior to overfilling, alert the operator with a high level alarm one minute before overfilling, or automatically shut off flow into the tank so that none of the fittings located on top of the tank are exposed to product due to overfilling. There are three basic types of overfill prevention devices: (i) shutoff valves, (ii) ball floats, and (iii) alarms. As with any requested spill prevention demonstration, if the site contact is unwilling or unable to remove covers for access needed to field verify overfill prevention, the inspector should make a note in the Comments section to ensure the demonstration is again requested in any future formal inspection.

### **Shutoff Valves**

An automatic shutoff device installed in an UST's fill pipe can slow down and then stop the delivery when product has reached a certain level in the tank. This device, sometimes referred to as a "fill pipe device," has one or two valves that are operated by a float mechanism. Some automatic shutoff devices work in two stages. The first stage drastically reduces the flow of product to alert the driver that the tank is nearly full. The driver can then close the delivery valve and still have room in the tank for the product left in the delivery hose.

In order to verify the presence of a shutoff valve, the inspector must ask the site contact to remove the manhole cover over the fill pipe and open the fill port. The inspector will then look into the fill pipe. A shutoff valve most often appears as a metal plate or flap inside the drop tube.

If the inspector verifies the presence of a shutoff valve, then the inspector should check the box under the applicable tank on the "Shutoff Valve" line. If the shutoff valve appears to be damaged or inoperative (valve bent or jammed open), the inspector should NOT check the box on the "Shutoff Valve" line and must make a note of the observed noncompliance in the Comments section.

### **Ball Float**

Ball float valves are placed at the bottom of the vent line several inches below the top of the UST. The ball floats on the product and rises with product level during delivery until it restricts vapor flowing out of the vent line-before the tank is full. If all tank fittings are tight, the ball float valve can create enough backpressure to restrict product flow into the tank, which will notify the driver to close the truck's shutoff valve.

It is not always possible to verify the presence of a ball float valve. Instances in which it is possible to verify the presence of a ball float valve include examination of access ports or extractor valve assemblies. Where the ball float valve cannot be accessed for visual evaluation, the inspector may

rely on the information reported in STORMS or by the O/O with 7530 (or purchase receipt) backup.

Ball float valves are ineffective when used in conjunction with suction piping, pressurized delivery or coaxial Stage I vapor recovery. Ball float devices must not be used with retail suction product piping, because the increased pressure in the tank (if the ball is seated with the tank overfilled) can push product out through the air eliminator at the dispenser, causing a spill at the fuel island. Ball float-vent devices must not be used with pressurized deliveries because, should the float-vent valve close, the pressure in the tank will rise 10 to 20 times above the tank's design pressure, a situation that has resulted in tank ruptures. Ball float devices are not compatible with coaxial Stage I vapor recovery as the float vent valve does not block the vapor return path around the drop tube, and so after overfill, the driver ends up with both the delivery hose and the vapor return hose full of product with no place for it to go. Therefore, at this time, where the owner reports or the inspector notices the use of a ball float valve in conjunction with suction piping, pressurized delivery, or coaxial Stage I vapor recovery, the inspector should note the information in the UST Inspection Checklist Comments section and notify the owner of the potential problems.

Except as noted above, if the inspector verifies the presence of a ball float valve, the inspector should check the box for the applicable tank on the "Ball Float" line. Additionally, the inspector should indicate whether the verification occurred through owner confirmation and/or the notification form by checking the appropriate box(es).

### **Overfill Alarms**

Overfill alarms use probes installed in the tank to activate an alarm when the tank is either ninety percent full or within one minute of being overfilled. In either case, the alarm should provide enough time for the driver to close the truck's shutoff valve before an overfill happens. Alarms must be located where the driver can see or hear them easily. Overfill alarms are often a part of automatic tank gauging systems. ATG system printouts may verify equipment is "disabled" which is considered non-compliance. An audible/visual alarm not working constitutes non-compliance. The owner must demonstrate the equipment is operable by testing the audible/visual alarm.

To verify the presence of an overfill alarm, the inspector should request that the site contact show them the overfill alarm, provide a printout that indicates it exists, or provide other records. If the inspector verifies the presence of the overfill alarm, the inspector should check the box for the applicable tank on the "Alarm" line of the Inspection Checklist. If the inspector cannot verify that there is an overfill alarm, the inspector should NOT check the box on the "Overfill Alarm" line and must make a note of the observed noncompliance in the Comments section.

### **Corrosion Protection (TANK and PIPE)**

All regulated UST systems are required to have corrosion protection. Three basic methods are used to provide corrosion protection to new tanks and piping. The first involves the use of corrosion-resistant material, such as fiberglass, for tank and pipe construction. The second involves the use of a corrosion-resistant coating with the addition of cathodic protection. The last method requires the use of a thick layer of corrosion-resistant material.

Three other methods are generally used to provide corrosion protection to tanks and piping originally installed without corrosion protection. The first requires the addition of cathodic protection (with prior assessment). The second involves the addition of a lining to the tank interior (with prior internal inspection). The last involves a combination of cathodic protection (with prior assessment) and interior lining.

The inspector should note which method the owner uses by checking the appropriate box in the corrosion protection section of the Inspection Checklist, Section III. If no corrosion protection is used, then none of the boxes in the corrosion protection section should be marked and the inspector should make a note of the deficiency in the Comments section. Where it is not possible to view the tanks and/or piping, the inspector may rely on the information reported in Form 7530/STORMS or ask for installation records if STORMS and field data conflict (professional judgement used to differentiate as-built versus as-designed issues). Where the site contact is unwilling or unable to provide access to areas of the facility that need to be inspected in order to perform visual verification (e.g., inside manways or fill ports), the inspector should make a note in the Comments section to ensure such access is again requested in a future formal inspection of the facility. Fill pipes are considered not to "routinely contain product"; therefore, no corrosion protection or release detection is required on them. Drain lines or remote fill lines are considered to be the same as fill pipes.

Flex connectors and pump housings with soil/water contact are non-compliant. To be compliant the owner may remove soil/water or properly add anodes.

### **Cathodically Protected Metal (Impressed or Galvanic)**

Metal tanks and piping may be cathodically protected using either impressed current or galvanic systems. Impressed current systems require a rectifier with wires connected to the anodes that are located in the tank and piping field areas. Galvanic systems use sacrificial anodes (i.e., no electricity required) to provide the cathodic protection. Sacrificial anodes are normally located underground and connected to the tank and/or piping. The most common type of sacrificial anode system (Sti-P3) was designed to contain a test port.

To verify the presence of cathodically protected metal for either tanks or piping, the inspector must ask the site contact to show the inspector visual evidence of the impressed current or galvanic system. Impressed current systems always contain a rectifier with connecting wires to field anodes. To verify the presence of galvanic systems, the inspector should ask whether a test port exists at the facility, and if so, also should ask the site contact to remove any covers over the test port. Where a factory installed galvanic system is present on the tank there should be a test wire. However, not all galvanic systems contain a test port. Where the system lacks a test port, the inspector may wish to perform verification using a records check.

The UST Technical Regulation requires testing of the CP system within the first six months of installation and every three years thereafter. Therefore, the site contact should be able to provide the inspector with evidence of the tests. The test may be used to verify the presence of galvanic systems and correct functioning of the systems. A test report that indicates the system "passed" in accordance with a code of practice developed by a nationally recognized association (NACE) and was performed by a cathodic protection tester or more qualified individual is acceptable. Inspector discretion is used to correlate that all tanks and product pipe are corrosion protected.

Each galvanic sacrificial anode is effective only with small metallic surface areas. Therefore, if the galvanic system appears to the inspector to have too few anodes to cover the surface area purported to be cathodically protected, the inspector should make a note in the Comments section.

### **Fiberglass**

Fiberglass is a construction material that commonly is corrosion-resistant. Therefore, tanks or piping constructed of fiberglass meet corrosion protection requirements. There are several national brands of fiberglass tanks. Although at some facilities the tanks and/or piping are completely

covered by soil, the tanks and/or piping may be partially visible at many newer facilities. At such facilities, the inspector may ask the site contact to remove the sump covers or other access port lids in order to view a portion of the tank and/or piping. Where it is not possible to view the tanks and/or piping, the inspector may rely on the information reported in STORMS.

### **Composite (Steel/Fiberglass)**

Some steel tanks are clad ( $> 100$  mils or  $> 1/10$  inch) with an outer non-corrodible material<sup>6</sup>. Because the thick cladding alone provides adequate protection, composite tanks meet the Technical Regulation corrosion protection requirements. There are several national brands of composite tanks. Visual verification is often not possible for this corrosion protection method. Therefore, the inspector may rely on the information reported in STORMS.

### **Secondary Containment/Double Walled**

Few tanks in the past used secondary containment or double walled construction for corrosion protection compliance; however, use of this method is increasing. Secondary containment involves the use of a tank pit liner or tank jacket (commonly made of plastic) such that the interstitial space (i.e., the space between the tank and the liner) can be monitored for releases. Double walled construction involves a rigid second outer tank wall that can be made from a variety of materials. Double walled construction is a common form of secondary containment, which features an interstitial space between the tank and the outer wall that can be monitored for releases. For all forms of secondary containment, as a minimum, the outer wall must be corrosion protected. Visual verification may be possible for secondary containment where the owner uses interstitial monitoring. Interstitial monitoring is required for hazardous substance tanks (9 VAC 25-580-150). Although it is not required for petroleum tanks, it is often recommended. Where interstitial monitoring is being performed, there are several ways the inspector may be able to verify that this is an indicator of the owner's corrosion protection method.

- a. A module or sensor may be mounted on the wall inside a building near the tank. This module or sensor will activate an alarm when a substance is detected in the interstitial space.
- b. Some interstitial spaces are vacuums or filled with a brine solution or another type of interstitial fluid. For such systems, there is a vacuum gauge on the tank that shows the vacuum has been maintained or a sight-glass that shows that the system remains fluid-filled.
- c. Some interstitial spaces are designed for manual gauging. For such systems, the inspector may perform the visual verification by viewing the test port that the facility owner uses to perform the gauging.

Where the owner does not use interstitial monitoring, the inspector may rely on the information reported in STORMS to determine compliance with corrosion protection requirements.

### **Lined Interior**

Lining the interior of existing tanks<sup>7</sup> is another method acceptable to meet tank corrosion protection requirements. It is not feasible to line piping. Lining entails emptying the tank, internally inspecting the tank for holes, sandblasting the tank, then spraying fiberglass epoxy resin to the prescribed thickness on the inside of the tank. It is not possible for the inspector to visually verify

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<sup>6</sup> Piping normally is not of composite construction.

<sup>7</sup> Note that it is not possible to line piping.



that a tank is lined without using methods that are not recommended or not feasible (e.g., use of a remote video camera).

Prior to lining a tank, an internal inspection must be performed to ensure the tank is suitable for lining. Lining must be inspected within ten years of installation and every five years thereafter to ensure that the lining integrity is maintained. Thus, if the lining is more than ten years old, the inspector may request the site contact to provide the lining inspection report. Otherwise, the inspector may rely on the information in STORMS.

### **Other Approved Method**

Other methods that meet the performance standards of the regulation are acceptable to meet the corrosion protection requirements. Examples include, but are not limited to, epoxy-lined concrete tanks, triple-walled tanks, and piping in concrete trenches. Where the owner reports use of an alternate method, the inspector should write in the name and type of method used. If visual verification is possible, the inspector also should confirm the corrosion protection method reported by the owner. If visual verification is not possible, the inspector may rely on the information in STORMS.

Fill pipes do not require corrosion protection. Used oil systems often have remote fills that gravity feed product to the tank. Installed under a required industry standard 1/8"/foot minimum slope, this pipe always drains like a fill pipe and thus by not "routinely containing product" does not need corrosion protection (or release detection).

Where the owner does not use one of the previously listed types of corrosion protection (i.e., cathodically protected metal, fiberglass, composite, secondary containment/double walled, or lined interior), then the inspector should confirm the acceptability of the alternate method with the UST Compliance Program Manager in OSRR.

### **3.3.4 Release Detection (Tank)**

Seven common types of release detection for tanks are used in the regulated community. Release detection is required for all regulated tanks, but not for excluded, deferred, and partially deferred tanks described under 9 VAC 25-580-20.

The inspector should note which method the owner uses by checking the appropriate box in the release detection (tank) section of the Inspection Checklist, Section III (or by checking the "Not Applicable" box for excluded, deferred and partially deferred tanks). If no release detection is used and the tanks are regulated, then none of the boxes in the release detection section should be marked and the inspector should make a note of the deficiency in the Comments section. Where the site contact is unwilling or unable to provide access to areas of the facility that need to be inspected in order to perform visual verification (e.g., monitoring device access port), the inspector should make a note in the Comments section to ensure such access is again requested in a future formal inspection of the facility.

### **Inventory Control + Tank Tightness Testing (IC + TTT)**

Before 1998, IC + TTT was the most commonly used method of release detection. The regulation allows use of IC + TTT for only ten years after either installation or upgrade of the "tank".

Therefore, the inspector must determine the tank installation and/or upgrade date to investigate whether owners that continue to use IC + TTT must switch to another release detection method.

Owners using IC + TTT beyond the ten year period are not in compliance with regulatory requirements. Owners who are still within the ten year period must perform IC + TTT as follows:

#### **IC**

The owner/operator must perform IC every day that the business is open. IC may be used only if the tank in question has a drop tube and dispensing is calibrated accurately according the Bureau of Weights and Measures requirements<sup>8</sup>. The owner/operator performs IC by: (i) using a dipstick which is marked at 1/8" increments, (ii) measuring the product level in the tank, and (iii) reconciling the measurement with delivery receipts (by measuring the tank inventory volume before and after delivery, taking into account any water in the bottom of the tank<sup>9</sup>) and sales. On a monthly basis, the difference between the volume reflected via the delivery receipts and petroleum product sales and the volume reflected by the dipstick measurements should be no more than 1% of total gallons pumped for the month + 130 gallons.

To verify that the owner/operator has conducted IC, the inspector may request the site contact to present the IC records. For an informal inspection, the inspector need not review the IC records to ensure that the performance standard discussed above is met. Rather, the inspector simply determines whether such records are present.

#### **TTT**

As of December 22, 1998, tanks that meet corrosion protection requirements are required to be tightness tested every five years if IC + TTT is the method of release detection. A third party testing company normally performs tank tightness tests.<sup>10</sup> To comply with regulatory requirements, TTT must be capable of detecting a 0.1 gallon per hour leak rate from any portion of the tank that routinely contains product while accounting for the effects of thermal expansion or contraction of the product, vapor pockets, tank deformation, evaporation or condensation, and the location of the water table. Additionally, the TTT must have a 95% probability of detecting a release, with no more than a 5% probability of a false alarm. To verify that the owner/operator has obtained the required TTTs, the inspector may request the TTT results. For an informal inspection, the inspector need not confirm that the TTT meets the requirements listed above. Rather, the inspector need only verify the presence of the TTT records. Other release detection methods (SIR and ATG) are capable of performing a valid TTT. TTTs performed monthly by an ATG or other method qualify as proper release detection.

#### **Manual Tank Gauging (MTG) (+ TTT)**

Except for used oil tanks at retail facilities, MTG is an infrequently used method of release detection. MTG is permitted only for tanks with a capacity of 2,000 gallons or less and requires sticking the tank at the beginning and end of a 36-, 44-, or 58-hour quiet period (i.e., period during which the tank cannot be used) using a dipstick marked at 1/8" increments.

For tanks with a storage capacity up to 550 gallons, the owner is required to perform a 36-hour test without TTT. MTG is required weekly, with the weekly test results being averaged monthly. A difference of ten gallons for a weekly test is considered acceptable and does not require the report of a suspected release. A four-week average difference of 5 gallons is similarly considered acceptable and does not require the report of a suspected release. Differences in excess of these

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<sup>8</sup> The accuracy must be six cubic inches for every five gallons of product withdrawn.

<sup>9</sup> The water level is determined via water sensitive paste applied to the bottom of the dipstick which changes color to indicate the presence of water.

<sup>10</sup> Some owners, such as jobbers, may have the equipment to perform their own tank tightness tests.

amounts require the report of a suspected release.

For tanks with a storage capacity greater than 550 gallons up to and including 1,000 gallons in which the tank diameter is 64", a 44-hour test without TTT is required. A difference of nine gallons for a weekly test is considered acceptable, and a four-week average difference of 4 gallons is similarly considered acceptable. Differences in excess of these amounts require the report of a suspected release.

For tanks with a storage capacity greater than 550 gallons up to and including 1,000 gallons in which the tank diameter is 48", a 58-hour test without TTT is required. A difference of 12 gallons for a weekly test and a four-week average difference of 6 gallons are considered acceptable. Differences in excess of these amounts require the report of a suspected release.

For tanks with a storage capacity greater than 550 gallons up to and including 1,000 gallons in which the tank diameter is anything other than 48" or 64" or the diameter is unknown, a 36 hour test with TTT is required. A difference of 13 gallons for a weekly test and a four-week average difference of 7 gallons are considered acceptable. Differences in excess of these amounts require the report of a suspected release. In addition, TTT must be performed every five years and must meet the TTT detection standards listed in the preceding section. Release detection methods that include TTT are allowed only for ten years after the upgrade or installation of the tank.

For tanks with a storage capacity greater than 1,000 gallons up to and including 2,000 gallons, regardless of tank diameter, a 36-hour test with TTT is required. A difference of 26 gallons weekly and a four-week average difference of 13 gallons are considered acceptable. Differences in excess of these amounts require the report of a suspected release. In addition, TTT must be performed every five years and must meet the TTT detection standards listed in the preceding section. MTG release detection methods that include TTT are allowed only for ten years after the upgrade or installation of the tank.

To verify MTG (+ TTT), the inspector may request the records of the test results. For informal inspections, the inspector need only verify the presence of such records, but need not perform a detailed review of the records.

### **Automatic Tank Gauging (ATG)**

ATG is a commonly used form of release detection. ATG involves the use of equipment that tests for the loss of product<sup>11</sup>. ATG equipment must be able to detect a loss rate of 0.2 gallons/hour.

The equipment's accuracy must be 95% probability of detection with no more than a 5% probability of false alarm. There are a number of ATG brands in use. To verify the presence of ATG, the inspector may view the ATG console or box, which is usually in the facility office/station. If necessary, the site contact can show the inspector that the number of modules in the ATG matches the number of tanks. For an informal inspection, the inspector need not view ATG records nor require a demonstration. Rather, the inspector simply verifies the presence of the ATG equipment.

### **Vapor Monitoring**

Vapor monitoring is not commonly used. This form of release detection involves vapor wells around the tank pit (i.e., excavation zone) and/or piping runs and requires monthly vapor measurements using monitoring devices such as vapor testing tubes, flame detectors (FIDs), or

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<sup>11</sup> Although 9 VAC 25-580-160(4) indicates that IC is required with ATG, EPA guidance has clarified that ATG meets the performance requirements of 9 VAC 25-580-160(8), thus eliminating the need for IC.

photoionization detectors (PIDs). Vapor monitoring via sniff testing is not an acceptable technique. The following requirements apply for vapor monitoring: (i) backfill materials must be porous; (ii) the stored substance must be sufficiently volatile to result in a detectable vapor level if a release occurs<sup>12</sup>; (iii) groundwater, rainfall, soil moisture, or other interferences must not render the vapor monitoring inoperative; (iv) the level of background contamination in the excavation zone must not interfere with the detection of new releases; (v) the vapor monitoring equipment is designed to detect increases in concentrations above the background level, a component of the substance stored or any tracer compound; (vi) upon installation of the vapor monitoring method, the site must be assessed to ensure the previous five requirements can be met and to establish the number and position of the wells; and (vii) monitoring wells must be clearly marked and secured. To verify the presence of this kind of release detection equipment, the inspector may view the vapor monitoring well ports (marked with white background and black equilateral triangle) and monitoring equipment or a monitoring box. The inspector need not request records pertaining to vapor monitoring for informal inspections.

### **Groundwater Monitoring**

Groundwater monitoring involves the monthly evaluation of groundwater monitoring wells to ascertain the presence of regulated substance on the groundwater. To use groundwater monitoring, the following requirements must be met: (i) the substance stored must not be readily miscible in water and must have a specific gravity of less than one (floats on water); (ii) groundwater cannot be more than twenty feet from the ground surface and the hydraulic conductivity between the UST system and the wells cannot be less than 0.01 cm/sec (i.e., soil should consist of gravels, coarse to medium sand, coarse silt, or other permeable material, not clayey soils); (iii) the slotted portion of the well casing must be designed to prevent migration of natural soils or filter pack into the well and to allow entry of regulated substance on the water table into the well under both high and low groundwater conditions; (iv) the well must be sealed from the ground surface to the top of the filter pack; (v) the well must intercept the excavation zone or be as close to it as is technically feasible; (vi) the monitoring devices or manual method must be able to detect the presence of no less than 1/8" of free product on top of the groundwater in the monitoring wells; (vii) the site must be assessed to ensure compliance with the preceding requirements and to establish the number and position of the wells (In cases where the wells are in the tank backfill (gravel) and groundwater is always in the tank pit, the inspector may determine that no assessment is required.); and (viii) the wells must be clearly marked and secured.

To verify the presence of this kind of release detection equipment, the inspector may view the groundwater monitoring well ports (marked with white background and black equilateral triangle) and monitoring equipment or a monitoring box. The inspector need not request records pertaining to groundwater monitoring for informal inspections.

### **Interstitial Monitoring**

Interstitial monitoring (between the UST system and a secondary barrier immediately around or beneath the system) may be used if the system is designed, constructed, and installed to detect a leak from any portion of the tank that routinely contains product and also meets one of the

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<sup>12</sup> Thus, vapor monitoring is an acceptable method for a volatile substance such as gasoline, but not for heavy, less volatile petroleum products such as crude oil or residual fuel oils. The ability to vapor monitor middle distillates such as diesel and kerosene is questionable.

following requirements:

- a. For double-walled UST systems, the sampling or testing method can detect a release through the inner wall in any portion of the tank that routinely contains product; or
- b. For UST systems with a secondary barrier, the sampling or testing method can detect a release between the UST system and the secondary barrier. Additionally, (i) the secondary barrier around or beneath the UST system consists of artificially constructed material that is sufficiently thick and impermeable to direct a release to the monitoring point and permit its detection; (ii) the barrier is compatible with the regulated substance stored; (iii) for cathodically protected tanks, the secondary barrier must not interfere with proper operation of the cathodic protection system; (iv) groundwater, soil moisture, or rainfall will not render the testing or sampling method used inoperative, such that a release would go undetected more than 30 days; (v) the site is assessed to ensure the secondary barrier is always above the groundwater and is not in a 25-year flood plain, unless specifically designed for such conditions; and (vi) the monitoring wells are clearly marked and secured.
- c. For tanks with an internally fitted liner, an automated device can detect a release between the inner wall of the tank and the liner, and the liner is compatible with the substance stored.
- d. To verify the presence of interstitial monitoring, the inspector may view test ports or detection devices (such as monitoring consoles inside the station). For an informal inspection, the inspector need not request records pertaining to interstitial monitoring.

### **Statistical Inventory Reconciliation (SIR)**

SIR requires sticking the tank on a daily basis and performing a monthly statistical review of the results. This review may be performed in-house by the UST site owner or by a SIR vendor. SIR must be able to detect a 0.2-gallon per hour leak rate or a release of 150 gallons within a month with a 95% probability of detection and no more than a 5% probability of false alarm. To verify that an owner has performed SIR, the inspector may request that the site contact produce the monthly SIR statistical review. For an informal inspection, the inspector need not perform a detailed analysis of the records; rather, the inspector verifies the presence of such records. Some SIR vendors' methods require periodic TTT. Also, SIR may be used every five years at 0.1 gph (95/5) to satisfy TTT requirements under IC + TTT or to TTT a tank upon request for a site check when a release is suspected.

### **Other Approved Methods**

If the site contact presents any other tank release detection method, the inspector must confirm the acceptability of such method with the OSRR UST Compliance Program Manager and perform reasonable steps to verify the presence of such method at the facility.

### **3.3.5 Release Detection (Piping)**

It is not uncommon for facilities to have a combination of release detection methods, especially at facilities where double-walled piping systems are used. In general, pressure pipe needs both an automatic line leak detector (ALLD) and either an annual line test or monthly monitoring. Suction piping that does not meet the release detection criteria for exempt suction pipe must be tested every three years. Where the facility uses SIR, interstitial monitoring, and/or vapor/groundwater

monitoring, the testing requirement is met. To comply with release detection requirements, at least one method must comply fully with the requirements set out below.

### **Pressurized and Gravity Fed (Product Delivery) Piping**

Pressurized piping is commonly used. In pressure systems the pump is in the tank, not at the dispenser, as in suction systems. Pressurized piping must meet two standards for proper release detection. One standard requires continual use of a device or method called an automatic line leak detector (ALLD,) which should be capable of detecting a leak of 3 gallons per hour at 10 pounds per square inch in 1 hour of pump operation upon installation. Additionally, the piping must incorporate a second release detection method which requires a periodically conducted method, such as annual line tightness testing or a monthly release detection method, such as vapor monitoring, groundwater monitoring, interstitial monitoring, or other method such as SIR or ATG. The purpose of the ALLD is (i) to restrict or cut off flow to the dispenser when a drop in pressure occurs in the line or (ii) to trigger an audible or visual alarm when continuous sensors on the pipe detect a release. Commonly ALLDs are mechanical devices or electronic devices. ALLDs must be tested annually. Electronic LLDs usually self test themselves after every use. There should be a report from the ATG or LLD module. Owners are required to maintain the most recent annual test results for one year.

Mechanical ALLDs are usually housed under large manway covers which, may be circular or rectangular and are found at the top of a submersible pump in the tank. The housing units are generally opposite the fill ports and may be in totally enclosed units. A common type of mechanical ALLD is red in color and octagonal in shape and can be used for gasoline and diesel. Another common mechanical type is blue in color and hexagonal in shape.

Sump sensors are commonly discriminating or non-discriminating float switch devices placed in the pump sump to alarm when any liquid (water or fuel) is detected. Sump sensors meet the ALLD requirement and the interstitial monitoring requirement. As with other ALLDs, sump sensors must be tested annually and the results must be retained for one year. Sump sensors, such as those manufactured by ATG vendors can perform a self-test as explained in the manufacturer's specifications.

To verify the presence of ALLD or a sump sensor, the inspector should have the site contact remove the manway cover and the sump cover. ALLDs may be located in the piping run on top of or near the sump. A sump sensor is usually located in the sump and normally contains a float. If the site contact refuses to perform such demonstration, the inspector should make a note of the refusal in the Comments section and ensure that the demonstration is again requested in any future formal inspection.

To complete the Inspection Checklist, the inspector should visually verify the presence of the ALLD and determine the type of periodic monitoring in use and then check the appropriate box. If either no ALLD can be verified or no periodic monitoring can be verified, then the inspector should not check any of the boxes in the Release Detection (Piping) portion of the Checklist and should note the inability to verify in the Comments section.

### **ALLD + Annual Line Test**

In addition to performing the visual ALLD verification described above, the inspector may verify the annual line test requirements by asking the site contact to provide a copy of the most recent annual line test results. The inspector need not analyze the test results for an informal inspection; rather, the inspector need only verify the presence of the test results.

### **ALLD + ATG/LLD**

In addition to performing the visual ALLD verification described above, the inspector may verify the ATG by viewing the ATG module<sup>13</sup>.

### **ALLD + Vapor Monitoring**

In addition to performing the visual ALLD verification described above, the inspector may verify the presence of vapor monitoring wells adjacent to the product piping by using the same methods described under the tank vapor monitoring section above.

### **ALLD + Groundwater Monitoring**

In addition to performing the visual ALLD verification described above, the inspector may verify the presence of groundwater monitoring wells adjacent to the product piping by using the same methods described under the tank groundwater monitoring section above.

### **ALLD + Interstitial Monitoring**

In addition to performing the visual ALLD verification described above, the inspector may verify the presence of interstitial monitoring by using the same methods described under the tank interstitial monitoring section above. In the alternative, because sump sensors are the most common form of interstitial monitoring used the verification method for sump sensors described previously in this section may be used.

### **ALLD + Other Approved Methods (SIR)**

In addition to performing the ALLD verification described above, where the site contact presents any other piping release detection method, the inspector must confirm the acceptability of such method with the OSRR UST Compliance Program Manager and perform reasonable steps to verify the presence of such method at the facility. SIR is an acceptable alternative method and does not require confirmation of acceptability by the OSRR UST Compliance Program Manager (e.g., verify records and vendor indicates method is capable of 0.1 gph annual test or 0.2 gph monthly tests, etc.).

### **Suction Piping-Regulated**

Unlike pressurized systems in which the pump is located in the tank, for suction piping systems the pump is located at the dispenser. To verify that a pump is located in the dispenser, the inspector may request that the site contact unlock the dispenser. In the alternative, if there are more than one or two "pumps"(dispenser hoses) per dispenser, it is likely that the system is not a suction piping system, but is instead, a pressured piping system. Suction piping with the check valve at the dispenser will allow product to drain from the line. The site contact should provide information on the system design to allow the inspector to determine the necessary verification steps.

For regulated suction piping, owners may satisfy release detection requirements in one of two ways: (i) conduct a line tightness test on the underground piping every three years and retain the records for three years; or (ii) perform a monthly monitoring method and retain the records for one year. ATGs are capable of performing an annual line test (0.1gph) or qualifying under the other monthly methods (0.2gph) section of the regulation.

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<sup>13</sup> Note that some older ATG models cannot perform line tightness testing.

**Line Tightness Testing**

To verify that the owner has performed the required release detection using this method, the inspector should request the site contact to provide a copy of the most recent line tightness test results. To comply, the line tightness test results should show a leak rate of no more than 0.1 gallons per hour at a 95% probability of detection with no more than 5% probability of false alarm. For informal inspections, the inspector need verify only that the record exists, but need not analyze the results.

**Vapor Monitoring**

To verify the presence of this release detection method, the inspector may verify the presence of vapor monitoring wells and equipment adjacent to the piping by using the same methods described under the tank vapor monitoring section above.

**Groundwater Monitoring**

To verify the presence of this release detection method, the inspector may verify the presence of groundwater monitoring wells and equipment adjacent to the piping by using the same methods described under the tank groundwater monitoring section above.

**Interstitial Monitoring**

To verify the presence of this release detection method, the inspector may verify the presence of interstitial monitoring by using the same methods described under the tank interstitial monitoring section above.

**Other Approved Method (SIR)**

Where the owner uses any other piping release detection method, the inspector must confirm the acceptability of such method with the OSRR UST Compliance Program Manager and perform reasonable steps to verify the presence of such method at the facility. SIR is an acceptable alternative method and does not require confirmation of acceptability by the OSRR UST Compliance Program Manager (e.g., verify records and vendor indicates method is capable of 0.1gph annual test, etc.).

**Suction Piping-Unregulated**

If non-pressurized piping is sloped back to the tank and contains a check valve ONLY at the dispenser and not at the tank, the piping is exempt from release detection requirements. The inspector should be aware that the check valve is often included as part of the pump. Visual verification may be possible by asking the site contact to remove the pump cover and indicate where the check valve is located. Installation records or communications with the installer, however, are often the only way to determine if a check valve exists at the tank. In cases where a check valve is also at the tank, release detection is required. These cases require line testing every three years at a minimum or an approved monthly monitoring method. If the inspector is unable to perform visual verification or obtain installation records/installer communication, it is acceptable to rely on STORMS data.

**Gravity Fed (Fill Pipe) Piping --Unregulated** Used oil systems often have remote fills that gravity feed product to the tank. Installed under a required industry standard 1/8"/foot minimum slope, this



pipe always drains like a fill pipe and thus by not routinely containing product does not need corrosion protection or release detection.

### **3.4 Formal Inspections**

Formal inspections require completion of the entire Inspection Checklist. Formal inspections differ from informal inspections in that advance notice has been provided to the owner to ensure the site contact is prepared to remove covers to allow for visual verification of equipment and to provide required records. Formal inspections require more detailed reviews of equipment and records.

#### **3.4.1 Section IV - Tank Release Detection-Detailed Review**

Section IV of the Inspection Checklist addresses detailed technical requirements for tank release detection requirements for ACTIVE USTs.

##### **3.4.1.1 Inventory Control + Tank Tightness Testing (IC + TTT)**

###### **Applicable Tanks**

The inspector should check the appropriate box to indicate which tanks use IC + TTT for release detection.

###### **Eligibility Expiration Date**

As previously explained in the informal inspection section above, before 1998, IC + TTT was the most commonly used method of release detection. The regulation allows use of IC + TTT for only ten years after either installation or upgrade of the "tank." Therefore, the inspector must determine the tank installation and/or upgrade date to investigate whether owners continuing to use IC + TTT must switch to another release detection method. The inspector must note in Section IV of the Inspection Checklist, the expiration date for the owner's use of IC + TTT, which is ten years from the date of tank installation or upgrade. If possible, the inspector should enter this date as MM, DD, YY. However, MM, YY or simply the year is acceptable if more detailed information is not available.

If the owner is continuing to use IC + TTT after the eligibility expiration date, the inspector should note the potential violation of release detection requirements in the Comments section.

###### **Records**

Owners who are still within the ten year eligibility period must perform IC + TTT as described in the informal inspection section above. For the formal inspection, the inspector must perform a detailed records review for the most recent two months of data to ensure compliance with the performance requirements. For this release detection method, two categories of records are required: (i) inventory control records, and (ii) tank tightness testing records.

Inventory control may be conducted in a number of ways. Regardless of the method used, the owner is required on a daily basis to determine the difference between actual measured product volume and inventory record product volume. The basic calculation requires determining the starting volume for the day, adding volume delivered and subtracting volume pumped, then comparing this book value to the actual measured volume in the tank at the end of the day. The

instructions below are written for facilities where measurements occur via dipstick readings; however, it is acceptable for owners to use other methods such as ATG. Regardless of the method used, the owner is required to perform the daily measurements and calculations and the monthly calculations outlined below.

More detailed guidance on performing inventory control measurements and calculations is located in the EPA guidance entitled, "Doing Inventory Control Right For Underground Storage Tanks," and American Petroleum Institute Publication 1621, "Recommended Practice for Bulk Liquid Stock Control at Retail Outlets."

### **Inventory Control Records: Daily**

#### **a. Dipstick Readings**

Owners are required to take daily dipstick measurements (to 1/8") of the volume of product in the tanks, and record these measurements for every operating day (i.e., these measurements are not required on days in which the business is closed and the tanks are not used). The daily record should reflect the daily readings in gallons<sup>14</sup>.

If the daily records reflect that all required dipstick readings were taken, then the inspector should check the box in Section IV of the Inspection Checklist for "Daily stick readings to 1/8". If any of the readings are missing or the readings are not conducted to 1/8", the inspector should not check the box and should note the omission in the Comments section.

#### **b. Dispenser Totalizer Calculation**

Additionally, on a daily basis the owner must record the gallons pumped from each tank. Because one tank may have more than one dispenser, there may be more than one value recorded for this data measurement. To determine the number of gallons pumped from a tank each day, the numbers from the totalizer for each dispenser connected to the tank in question must be summed. Next, the sum of the current day's totalizers must be subtracted from the sum of the previous day's totalizers to determine the number of gallons pumped that day.

#### **c. Fuel Deliveries**

The daily records should reflect the number of gallons delivered to the tank each day.

### **Inventory Control Records: Monthly**

#### **a. Daily Change in Inventory Calculation**

The daily change in inventory is determined according to the following formula:

$$\begin{array}{rcccl} \text{Start dipstick} & & \text{Gallons} & & \text{Gallons} & & \text{BOOK} \\ \text{measurement} & + & \text{delivered} & - & \text{pumped} & = & \text{INVENTORY} \\ \text{in gallons} & & \text{that day} & & \text{that day} & & \text{(in gallons)} \end{array}$$

#### **b. Compare Book Value to Measurement**

The monthly inventory record should contain a comparison of the difference between the book inventory and the end of the day dipstick measurement for each day of operation. The formula is as follows:

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<sup>14</sup> Owners use a tank chart to compare the inches measurement on the dipstick reading to the corresponding number of gallons. Using the correct inches to gallons conversion chart is important for proper IC. If the inspector becomes aware that the owner is using the wrong chart, the inspector should inform the owner and require use of the correct chart.

Book Inventory                    -                    End of day dipstick reading = Daily overage or shortage (in gallons)

c.        Determine 1 % of Monthly Gallons Pumped

The monthly records should reflect the total number of gallons pumped for the month for each tank. Then, the monthly record should determine 1% of this amount. As the performance standard for release detection for the inventory control method is 1% of throughput + 130 gallons on a monthly basis, the monthly record should then reflect this calculation, as follows:

1% of total # gallons monthly throughput for the tank on a monthly basis	+	130 gallons	=	Acceptable # of gallons for overage or shortage
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d.        Monthly Reconciliation - Determine Actual Monthly Overage or Shortage

Section (b) above explains the method for determining daily differences between the book value and the measured value (end of day dipstick reading). To determine the monthly overage or shortage, the overage or shortage for each day is added or subtracted to determine the total gallons for the monthly overage or shortage.

*Compare Actual Monthly Overage or Shortage to Acceptable Number of Gallons for Monthly Overage or Shortage* - To determine whether the owner's inventory control records reflect acceptable overages/shortages in monthly inventory, the acceptable number of gallons for overage or shortage as determined in subpart (c) above is compared to the actual overage or shortage. If the actual number of gallons is less than the acceptable number of gallons, then the owner's IC meets the performance requirement. If the absolute value<sup>15</sup> of the actual number of gallons exceeds the acceptable number of gallons for two months in a row, then the owner was required to report a suspected release to DEQ.

If the records reflect the required monthly reconciliations and either show that (i) the IC met the performance requirement or (ii) the owner properly reported a suspected release, then the inspector should check the "Monthly reconciliation" box in Section IV of the Inspection Checklist. If the monthly reconciliations are incomplete or the owner failed to properly report a suspected release, then the inspector should leave the box blank and note the potential violation in the Comments section.

### Monthly Water Monitoring

The measurement of the water level at the bottom of the tank to the nearest 1/8" is required on a monthly basis and should be noted in the owner's monthly inventory control records. (The method for performing this measurement is described in the informal inspection section above. If there is more than a couple inches of water in the tank, it may be indicative of a problem and considered a suspected release.)

If the monthly records reflect this measurement, then the inspector should check the appropriate box in Section IV. If not, the inspector should leave the box blank and note the lack of these records in the Comments section.

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<sup>15</sup> The absolute value is the numerical value of a quantity without regard to its sign. For example, the absolute value of -54 is 54.

## **TTT**

Requirements pertaining to TTT are specified in the informal inspection section above. For a formal inspection, the inspector must confirm that the TTT meets the specified requirements. In short, this means the TTT method must be able to detect a 0.1 gallon per hour leak with 95% probability of detection and 5% probability of false alarm and that TTT was performed at the time of tank installation or upgrade and every five years thereafter. TTTs may be performed in a number of ways. A list of acceptable TTT methods is contained in the annually updated EPA guidance document entitled, "List of Leak Detection Evaluations for Underground Storage Tank (UST) Systems."

Owners are required to keep the record of the most recent test. Therefore, the inspector must determine the date of the tank installation or upgrade to determine when the last TTT was required. The inspector should enter into Section IV of the Inspection Checklist the date the last TTT was performed. If this date indicates a more recent TTT was due but not performed, the inspector should note the potential violation in the Comments section.

The inspector also must review the TTT to determine that the TTT method used meets the leak detection rate and accuracy requirements listed above. If the TTT method fails to meet these requirements, the inspector must note such failure in the Comments section.

Next, the inspector must review the TTT results to determine whether the tank passed the TTT. If so, the inspector will check the "Tank passed TTT" box in Section IV of the Inspection Checklist. If not, the inspector will leave the box blank and will determine whether the owner properly reported a suspected release. If TTT was "inconclusive" then the box should be left blank and another TTT conducted or treat the situation as a "suspected release." The inspector must note in the Comments section whether or not the owner reported a suspected release for a failed TTT. If all daily and monthly IC records and all TTT records are present and complete, the inspector should check the box to the right of "Complete" in the "Records" line of Section IV-Inventory Control and Tank Tightness Testing of the Inspection Checklist. If any records are absent or incorrect, the inspector should check the box to the right of "Incomplete." If no records at all were presented, the inspector should check the "No Records" box. Where the site contact did present records, the inspector should fill in the month and year for the months reviewed.

## **Other IC + TTT Inspection Measures**

### **Fill line/access port with drop tube**

The inspector must ask the site contact to remove any covers blocking access to visual verification of the presence of a drop tube in the fill pipe (access port). If the inspector verifies the presence of a drop tube, the inspector should check the appropriate box in Section IV of the Inspection Checklist. If the presence of the drop tube cannot be verified then the box should be left blank and the inspector should note in the Comments section that no drop tube was observed.

### **Dipstick**

The inspector must examine the dipstick for those owners using a dipstick to perform daily IC measurements. First, the inspector must determine if the dipstick is marked correctly at 1/8" intervals. If so, the inspector should check the "Yes" box. If not, the inspector should check the "No" box.

Next, the inspector must determine if the dipstick is in serviceable condition. Dipsticks that are

broken, taped, cracked or that have ends that are worn are not considered in serviceable condition. The inspector should check "Yes" if the dipstick is in serviceable condition and "No" if it is not. If the inspector checked "No," the inspector should note the problems with the dipstick in the Comments section.

If the owner uses ATG or some other daily measurement method, the inspector should check the "N/A" box.

### **3.4.1.2 Manual Tank Gauging (MTG and MTG+TTT)**

#### **Applicable Tanks**

The inspector should check the appropriate box to indicate which tanks use MTG (or MTG + TTT) for release detection.

#### **Eligibility Expiration Date**

As previously explained in the informal inspection section above, the regulation allows use of MTG + TTT for only ten years after either installation or upgrade of the tank for tanks larger than 550 gallons which have any diameter other than 48" or 64" or for any tank between 1,001 and 2,000 gallons, inclusive. Therefore, the inspector must determine tank installation date to investigate whether an owner of such tanks continuing to use MTG + TTT must switch to another release detection method. The inspector must note in Section IV of the Inspection Checklist, the expiration date for the owner's use of MTG + TTT, which is ten years from the date of tank installation or upgrade. If possible, the inspector should enter this date as MM, DD, YY. However, MM, YY or simply the year is acceptable if more detailed information is not available. If the owner is continuing to use MTG + TTT after the eligibility expiration date, the inspector should note the potential violation of release detection requirements in the Comments section.

#### **Tank is 2,000 Gallons or Less**

As previously explained in the informal inspection section, MTG, either with or without TTT, is allowed only for tanks with a capacity of 2,000 gallons or less. Therefore, the inspector must verify that the owner is using this method only on tanks of appropriate capacity. If so, the inspector should check the appropriate box. If not, the inspector should leave the box blank and note the potential violation in the Comments section.

#### **Records**

Owners who are eligible for continued use of MTG or MTG + TTT must perform MTG (+ TTT) as described in the informal inspection section above. For the formal inspection, the inspector must perform a detailed records review for the most recent two months of data to ensure compliance with the performance requirements. For this release detection method, two categories of records are required: (i) gauging records and (ii) tank tightness testing records.

MTG may be conducted in a number of ways. Regardless of the method used, the owner is required on a weekly basis to determine the difference between actual measured product volume over a period of time in a dormant tank. The basic calculation requires determining the product volume for the beginning of the test, determining the product volume at the end of the test, and determining if any difference in the measured volumes exceeds acceptable standards for such differences. The instructions below are written for facilities where measurements occur via

dipstick readings; however, it is acceptable for owners to use other methods such as ATG. Regardless of the method used, the owner is required to perform the weekly measurements and calculations and monthly calculations outlined below.

More detailed guidance on performing manual tank gauging measurements and calculations is located in the EPA guidance entitled, "Manual Tank Gauging for Small Underground Storage Tanks."

## **MTG Records: Weekly**

### **Dipstick Readings**

Each week, the owner who uses MTG, must perform dipstick measurements at two times. The first time occurs at the beginning of the test for the tank. The second time occurs at the end of the test. At each measurement time, the owner must take two dipstick readings and determine the average. Following are the required durations for tests:

<u>Tank Size (gallons)</u>	<u>Test Duration</u>
Up to 550	36 hours
551-1,000 (64" diameter)	44 hours
551-1,000 (48" diameter)	58 hours
551-1,000 (any other diameter)	36 hours
1,001 - 2,000	36 hours

If the records reflect that when the owner took weekly measurements, the owner took the measurements at the two required times (i.e., at the beginning and ending of the test) and to the nearest 1/8 inch, the inspector should check the box on the "Stick readings to 1/8"" line. If the owner missed either of the two measurements for any week, in which the owner performed MTG, this box should be left blank or the inspector should note omissions in the Comments section.

If the records reflect that the owner took the average of two measurements at each measurement event, then the inspector should check the box on the "Two liquid measurements taken" line. If the owner failed to take the average of two measurements at each measurement event, then the inspector should leave the box blank and make a note in the Comments section.

If the records reflect that the owner performed the measurements correctly each week for the months examined, then the inspector should check the box on the "Method is performed weekly" line. If the owner failed to perform MTG for any one or more weeks during the months examined, then the inspector should leave the box blank and note the omissions in the Comments section.

### **Results Variation**

Variations (i.e., differences) between the beginning and ending product volume for both the weekly tests and the monthly (4-week) average are permissible up to the following amounts:

<u>Allowable</u> <u>Tank Size (gallons)</u>	<u>Allowable</u> <u>Weekly Variation</u>	<u>Monthly (4-week) Variation</u>
Up to 550	10 gallons	5 gallons
551-1,000 (64" diameter)	9 gallons	4 gallons
551-1,000 (48" diameter)	12 gallons	6 gallons
551-1,000 (any other diameter)	13 gallons	7 gallons

1,001 - 2,000

26 gallons

13 gallons

If the records reflect that variations were within these acceptable standards, then the inspector should check the box for "Results variation within standard." If not, the inspector should leave the box blank and note in the Comments whether the owner reported a suspected release. When the variation exceeds the acceptable standard, the owner is required to report it to DEQ.

### **Date last monitoring**

The inspector should note in the "Date last monitoring" line the MM, DD and YY of the last manual tank gauging event. If the event did not occur according to the schedule required, the inspector should make a note to that effect in the Comments section.

### **TTT**

For tanks 551-1,000 gallons of any diameter other than 48" or 64" and for tanks between 1,001 and 2,000 gallons, inclusive, periodic TTT is required in addition to MTG. For such tanks, TTT is required upon installation or upgrade of the tank and every five years thereafter. If TTT is not required for the tank, the inspector should check the "TTT NOT Required" box. When TTT is required but was not performed, the inspector should leave the "Date of last TTT" and "Tank passed TTT" lines blank, and note the failure to conduct TTT in the Comments section. The following table summarizes tanks subject to TTT requirements:

<u>Tank Size (gallons)</u>	<u>Test Duration</u>	<u>Tank Test</u>
Up to 550	36 hours	No
551-1,000 (64" diameter)	44 hours	No
551-1,000 (48" diameter)	58 hours	No
551-1,000 (any other diameter)	36 hours	Yes
1,001 - 2,000	36 hours	Yes

When the TTT was performed, the inspector should enter the date of the last TTT by MM, DD, YY on the "Date of last TTT" line and should check the box on the "Tank passed TTT" line if the tank passed. If the tank did not pass, the inspector should note in the Comments section whether or not the owner reported a suspected release.

If all weekly and monthly MTG records and all TTT records are present and complete, the inspector should check the box to the right of "Complete" in the "Records" line of Section IV- Manual Tank Gauging. If any records are absent or incorrect, the inspector should check the box to the right of "Incomplete." If no records at all were presented, the inspector should check the "No Records" box. When the site contact did present records, the inspector should fill in the month and year for the months reviewed.

### **Dipstick**

The inspector must examine the dipstick for those owners using a dipstick to perform weekly MTG measurements. First, the inspector must determine if the dipstick is marked correctly at 1/8" intervals. If so, the inspector should check the "Yes" box. If not, the inspector should check the "No" box.

Next, the inspector must determine if the dipstick is in serviceable condition. Dipsticks that are broken, taped, cracked or that have ends that are worn are not considered in serviceable condition.

The inspector should check "Yes" if the dipstick is in serviceable condition and "No" if it is not. If the inspector checked "No," the inspector should note the problems with the dipstick in the Comments section.

If the owner uses ATG or some other weekly measurement method, the inspector should check the "N/A" box.

### **3.4.1.3 Automatic Tank Gauging (ATG)**

#### **Applicable Tanks**

The inspector should check the appropriate box to indicate which tanks use ATG for release detection. A way to identify this method is to look for the ATG console in the office. There are many ways to verify that the ATG is connected to all tanks. For instance the ATG will printout Probe and Sensor numbers in relation to tanks and lines. It will also print Tank #s and product on the leak test report or inventory report. Also, the ATG risers may be counted in the field and by doing this, the inspector can determine that there are probes in ALL tanks. Also, the inspector may ask the site contact to open the console and note the number of probe modules attached. Counting the number of probe wiring connections generally indicates the number of tanks. (Many ATGs operate under the "other methods" section of the regulation; thus daily inventory control recording is not required.)

#### **Records**

The informal inspection section above provides guidance on how to verify the presence of ATG equipment at a facility. For formal inspections, besides verifying presence of the equipment, the inspector also must verify that the equipment functions properly. To function properly, the ATG equipment must be able to detect releases at a rate of 0.2 gallons per hour (gph). To verify proper functioning, the inspector should review the test results from the most recent two months of ATG reports. If the reports show that the equipment met the detection rate, then the inspector should check the box on the "Conducts monthly monitoring @ .2 gph" line. If the reports show the equipment did not meet the 0.2 gph detection rate, then the inspector should leave the box blank and provide details in the Comments section, including whether the owner reported a suspected release. The inspector should also list the MM, DD, YY of the most recent monitoring event (i.e., date of last report).

Additionally, the inspector must ask the site contact to demonstrate that the ATG equipment appears functional. If electronic readouts appear to be on, the inspector may conclude the system appears functional and should check the yes box on the "System appears functional" line. Finally, the inspector should note the ATG model number and vendor name on the "ATG type/vendor" line.

If monthly ATG records are present and complete, the inspector should check the box to the right of "Complete" in the "Records" line of Section IV-Automatic Tank Gauging. If any records are absent or incorrect, the inspector should check the box to the right of "Incomplete." If no records at all were presented, the inspector should check the "No Records" box. When the site contact did present records, the inspector should fill in the month and year for the months reviewed.

*Third Party Certifications for ATGs* - Third Party Certifications set out the operating conditions under which ATGs operate properly. Most ATGs have Third Party Certifications for tanks up to 15,000 gallons. Special software is required for most ATGs to work on tanks larger than 15,000 gallons. The ATGs with the special software cost more, but are usually certified for large tanks.



Also, most ATGs do not have Third Party Certifications for manifolded tanks. Special software is also required in most of these cases. The inspector should always check certifications for manifolded tanks, high throughput tanks, or very large tanks, especially if the facility is having trouble with the ATG functioning properly. If the inspector discovers the operating conditions are inconsistent with the Third Party Certification information, use of the ATG is non-compliant.

#### **3.4.1.4 Vapor Monitoring (VM)**

##### **Applicable Tanks**

The inspector should check the appropriate box to indicate which tanks use vapor monitoring (VM) for release detection.

##### **Number of vapor monitoring wells at facility**

The inspector should ask the site contact to show the locations of the access ports for the vapor monitoring wells. The inspector should enter the number of wells verified in the "Number of vapor monitoring wells at facility" line.

##### **Records**

As described above in the informal inspection section, vapor monitoring requires monthly measurement of vapors in the vapor monitoring wells at the facility, using devices such as PIDs, FIDs, vapor testing tubes, or dedicated vapor sensors. To verify that monthly monitoring has occurred, the inspector must request and examine the monthly monitoring records for at least the two most recent months. If vapor monitoring results are reported for each well for each month reviewed, then the inspector should check the box on the "Data recorded monthly" line. If results are missing for any well or month, then the inspector should leave the box blank and record the details of the omission in the Comments section. If the inspector notes any monitoring results in excess of the site established background level, then the inspector should note in the Comments section whether or not the owner reported a suspected release.

In the "Date last monitoring event" line, the inspector should note the MM, DD and YY of the most recent monitoring data.

If monthly vapor monitoring records are present and complete, the inspector should check the box to the right of "Complete" in the "Records" line of Section IV-Vapor Monitoring. If any records are absent or incorrect, the inspector should check the box to the right of "Incomplete." If no records at all were presented, the inspector should check the "No Records" box. Where the site contact did present records, the inspector should fill in the month and year for the months reviewed.

##### **Wells Adjacent to Excavation**

The inspector should verify through visual review and professional judgement whether the wells appear to be appropriately placed. The vapor wells should be placed adjacent to or within the area of the tank fields and/or piping runs. If the inspector verifies appropriate placement, the inspector should check the Yes box on the "Wells adjacent to excavation" line. Otherwise, the inspector should check no and provide details in the Comments section.

##### **Monitoring Device Operative**

The inspector should ask the site contact to demonstrate that the PID or dedicated vapor sensor or

other vapor monitoring device is operative. If the device appears to be operative, the inspector should check Yes on the "Monitoring device operative" line. If not, the inspector should check No and provide details in the Comments section.

### **Wells Properly Installed**

The following requirements apply for the installation of vapor monitoring wells: (i) backfill materials must be porous; (ii) the stored substance must be sufficiently volatile to result in a vapor level if a release occurs; (iii) groundwater, rain fall, soil moisture or other interferences must not render the vapor monitoring inoperative; (iv) the level of background contamination in the excavation zone must not interfere with the detection of new releases; (v) the vapor monitoring equipment is designed to detect increases in concentrations above the background level, a component of the substance stored or any tracer compound; (vi) upon installation of the vapor monitoring, the site must be assessed to ensure the previous five requirements can be met and to establish the number and position of the wells; and (vii) monitoring wells must be clearly marked and secured.

If the owner has retained a copy of the assessment, then the inspector can verify most of the requirements through review of the assessment. If the owner no longer has the assessment records, then the inspector will be able to verify only items (ii), (iii) and (vii). If it appears the well installation requirements were met, the inspector should check Yes on the "Wells appear to be properly installed according to regulations" line. If the inspector observes that any installation requirement may not have been met, then the inspector should check No and note the details of the potential noncompliance in the Comments section. Owners must show that electronic sensors are operational.

## **3.4.1.5 Groundwater Monitoring (GM)**

### **Applicable Tanks**

The inspector should check the appropriate box to indicate which tanks use groundwater monitoring (GM) for release detection.

### **Number of release detection groundwater monitoring wells at facility**

The inspector should ask the site contact to show the locations of the access ports for the groundwater monitoring wells that are used for release detection (as opposed to any monitoring wells that may have been installed for corrective action activity). The inspector should enter the number of wells verified in the "Number of release detection groundwater monitoring wells at facility" line.

### **Records**

Groundwater monitoring requires monthly measurement of groundwater to determine to 1/8" accuracy whether free product exists on top of the water in the monitoring well. To verify that monthly monitoring has occurred, the inspector must request and examine the monthly monitoring records for at least the two most recent months. If groundwater monitoring results are reported for each well for each month reviewed, then the inspector should check the box on the "Data recorded monthly" line. If results are missing for any well or month, then the inspector should leave the box blank and record the details of the omission in the Comments section. If the inspector notes any

monitoring results indicating free product on the groundwater, then the inspector should note in the Comments section whether or not the owner reported a suspected release.

In the "Date last monitoring event" line, the inspector should note the MM, DD and YY of the most recent monitoring data.

If monthly groundwater monitoring records are present and complete, the inspector should check the box to the right of "Complete" in the "Records" line of Section IV-Groundwater Monitoring. If any records are absent or incorrect, the inspector should check the box to the right of "Incomplete." If no records at all were presented, the inspector should check the "No Records" box. Where the site contact did present records, the inspector should fill in the month and year for the months reviewed.

#### **Wells intercept or are adjacent to excavation zone**

The inspector should verify through visual review whether the wells are appropriately placed. The groundwater monitoring wells should be placed adjacent to or within the area of the tank fields. If the inspector verifies appropriate well placement, the inspector should check the Yes box on the "Wells intercept or are adjacent to excavation zone" line. Otherwise, the inspector should check no and provide details in the Comments section.

#### **Specific gravity < 1; immiscible**

The inspector should verify that the product stored in the tank is not miscible in water with a specific gravity < 1 (meaning that the product is light enough to float on water), a requirement for the use of the groundwater monitoring method of release detection. Such products include gasoline, diesel, kerosene, gasohol, heating oil and used oil. Products with a specific gravity > 1 may include crude oil, bunker C and certain hazardous substances. The inspector may verify the product in the tank by checking the marking on the fill port, checking the labels on the dispensers, asking the site contact, and/or reviewing delivery records.

If it appears the product has a specific gravity < 1, the inspector should check the box on the "Specific gravity < 1; immiscible" line. If the inspector either cannot verify the product or it appears the product has a specific gravity > 1, the inspector should leave the box blank and provide an explanation in the Comments section.

#### **Device detects 1/8" of free product / If auto monitor device operational**

The most commonly used devices for groundwater sampling include bailers, dipsticks with water/oil sensitive paste and dedicated monitoring devices. The inspector may assume that devices that allow for manual measurement of 1/8" of free product (such as bailers or dipsticks with water/oil sensitive paste) meet the requirement and may check Yes on the "Device detects 1/8" of free product" line. For electronic equipment such as a dedicated monitoring device, the inspector should ask the site contact for a demonstration that the device is functioning. If the device appears to be functioning, the inspector may check Yes both on the "Device detects 1/8" of free product" line and the "If auto monitor, device operational" line. If the device does not appear to be functioning, the inspector should check no on both lines and provide details in the Comments section.

#### **Wells Properly Installed**

The following requirements apply for groundwater monitoring well installation: (i) the substance stored must not be readily miscible in water and must have a specific gravity of less than one (floats

on water); (ii) groundwater cannot be more than twenty feet from the ground surface and the hydraulic conductivity between the UST system and the wells cannot be less than 0.01 cm/sec (i.e., soil should consist of gravels, coarse to medium sand, coarse silt or other permeable material, not clayey soils); (iii) the slotted portion of the well casing must be designed to prevent migration of natural soils or filter pack into the well and to allow entry of regulated substance on the water table into the well under both high and low groundwater conditions; (iv) the well must be sealed from the ground surface to the top of the filter pack; (v) the well must intercept the excavation zone or be as close to it as technically feasible; (vi) the monitoring devices or manual method must be able to detect the presence of no less than 1/8" of free product on top of the groundwater in the monitoring wells; (vii) the site must be assessed to ensure compliance with the preceding requirements and to establish the number and position of wells; and (viii) the wells must be clearly marked and secured. If the owner has retained a copy of the assessment, then the inspector can verify most of the requirements through review of the assessment. If the owner no longer has the assessment records, then the inspector will be able to verify only items (i), (v) and (vi) and (viii). If it appears the well installation requirements were met, the inspector should check Yes on the "Wells appear to be properly installed according to regulations" line. If the inspector observes that any installation requirement may not have been met, then the inspector should check No and note the details of the potential noncompliance in the Comments section. Owners must show that electronic sensors are operational.

#### **3.4.1.6 Interstitial Monitoring (IM)**

##### **Applicable Tanks**

The inspector should check the appropriate box to indicate which tanks use interstitial monitoring (IM) for release detection.

##### **Records**

Interstitial monitoring entails evaluating the interstitial space between the UST system and a secondary barrier immediately around or beneath the system, to determine if a release has occurred. This evaluation can be conducted through either (i) continuous or manual monitoring, or (ii) sampling.

If the owner conducts interstitial monitoring through continuous or manual monitoring, rather than through sampling, the inspector should enter the type of monitoring equipment used on the "Type of detection equipment used" line.

In the "Date last monitoring event" line, the inspector should note the MM, DD and YY of the most recent monitoring or sampling data. The results should be logged monthly.

If the interstitial monitoring records demonstrate that the interstitial monitoring was performed monthly and the results were recorded, the inspector should check the box on the "Checked monthly; recorded" line. If the records are incomplete or missing, the inspector should leave the box blank and detail the omission in the Comments section.

If monthly interstitial monitoring records are present and complete, the inspector should check the box to the right of "Complete" in the "Records" line of Section IV-Interstitial Monitoring. If any records are absent or incorrect, the inspector should check the box to the right of "Incomplete." If no records at all were presented, the inspector should check the "No Records" box. Where the site contact did present records, the inspector should fill in the month and year for the months reviewed.

**System appears functional**

The inspector should ask the site contact to demonstrate any equipment used to conduct interstitial monitoring. If the equipment appears to be functional, the inspector should check the box on the "System appears functional" line. If the equipment does not appear to be functional, the inspector should leave the box blank and note the details in the Comments section.

**3.4.1.7 Statistical Inventory Reconciliation (SIR)****Applicable Tanks**

The inspector should check the appropriate box to indicate which tanks use SIR for release detection. (For manifolded tanks the SIR vendor must have received third party evaluation of the method or self certify the method works on manifolded tanks in order for the method to be valid release detection.)

**Vendor Name**

If the owner uses a third party vendor to conduct its SIR, then the inspector should enter the vendor's name on the Vendor Name line.

**Method Conducted at 0.2 GPH Leak Rate or Less**

SIR must be able to detect releases at a rate of 0.2 gallons per hour (gph) or a release of 150 gallons within a month as specified in 9 VAC 25-580-160.8. To verify SIR has been conducted properly, the inspector should review the results from the most recent two months of SIR reports. If the reports show that the detection rate was met, then the inspector should check the Yes box on the "Method conducted at 0.2 gph leak rate or less" line. If the reports show the 0.2 gph detection rate was not met, then the inspector should check the No box and provide details in the Comments section, including whether the owner reported a suspected release.

**Records**

The inspector should enter the date of the most recent SIR report on the "Date of last SIR report" line in MM, DD, YY order.

Additionally, the inspector must determine whether the owner has conducted the required daily measurements and record keeping. To allow the vendor to perform SIR properly, the owner must provide the same categories of information as are required for IC. Thus, on a daily basis, the owner should take daily dipstick readings to 1/8" accuracy. Additionally, the owner should record gallons delivered to and gallons pumped from each tank. The inspector should review the owner's daily records to ensure this data has been collected. If the records show the owner conducted the required dipstick readings properly and to 1/8", the inspector should check the box on the "Daily stick readings to 1/8"" line. If the readings were incomplete or not conducted at all, the inspector should leave the box blank and make a note of the possible violation in the Comments section. If daily and monthly SIR records are present and complete, the inspector should check the box to the right of "Complete" in the "Records" line of Section IV-SIR. If any records are absent or incorrect, the inspector should check the box to the right of "Incomplete." If no records at all were presented, the inspector should check the "No Records" box. Where the site contact did present records, the inspector should fill in the month and year for the months reviewed.

**Dipstick**

The inspector must examine the dipstick for those owners using a dipstick to perform daily SIR measurements. First, the inspector must determine if the dipstick is marked correctly at 1/8" intervals. If so, the inspector should check the "Yes" box. If not, the inspector should check the "No" box.

Next, the inspector must determine if the dipstick is in serviceable condition. Dipsticks that are broken, taped, cracked or that have ends that are worn are not considered in serviceable condition. The inspector should check "Yes" if the dipstick is in serviceable condition and "No" if it is not. If the inspector checked "No," the inspector should note the problems with the dipstick in the Comments section.

If the owner uses ATG or some other method for performing daily product volume readings, then the inspector should check the "N/A" box for both of these lines.

**Results of "inconclusive" were investigated and corrected**

SIR reports will show one of three results: (i) pass; (ii) fail; or (iii) inconclusive. Inconclusive results occur due to incorrect dipsticking technique, poor record keeping, missed deliveries, not accounting for water in the tank, an inadequate number of data points, or a suspected release. If the SIR report shows inconclusive, the owner must investigate and correct whatever problem appeared to cause the inconclusive result. The site contact should be able to demonstrate or explain to the inspector the corrective measures taken in response to an inconclusive result. If no action was taken, and an inconclusive result occurred in the following month, the owner should have reported a suspected release. If the owner took corrective measures and reported a suspected release, if so required, the inspector should check the Yes box on the "Results of "inconclusive" were investigated and corrected" line. If either the owner failed to take corrective measures or failed to report a suspected release for two consecutive months of inconclusive results, the inspector should check the No box and provide an explanation in the Comments section.

**System appears functional**

Where a non-manual daily product volume measurement method (such as ATG) is used for measuring the daily product volume, the inspector should request that the site contact demonstrate the equipment is functional. If the equipment appears functional, the inspector should check the Yes box in the "System appears functional" line. If the equipment does not appear to be functioning, the inspector should check the No box and provide details in the Comments section.

**Limitations to SIR**

Large tanks greater than 18,000 gallons, tanks with large throughput, and tanks with water or small pinholes, can distort the SIR data. Refer to the "List of Leak Detection Evaluations" at <http://www.epa.gov/swerust1/ustsystem/nwgolde.htm#ldlist>.

**3.4.1.8 Other Methods****Applicable Tanks**

The inspector should check the appropriate box to indicate which tanks use other methods for release detection.

**Specify type/vendor**

If the owner uses another method involving equipment, then the inspector should enter the name of the equipment and vendor name on the "Specify type/vendor" line.

**Records**

Any alternate method of release detection must be capable of detecting a leak rate of 0.2 gph or a release of 150 gallons within a month with a probability of detection of 95% and a probability of false alarm of 5%. Where the owner uses an alternate release detection method, the inspector must verify that the method meets this requirement. If the method meets the requirement, the inspector should check the box on the ".2 gph" line. If the inspector cannot verify that the requirement has been met or if the method fails to meet the requirement, the inspector should leave the box blank and provide details in the Comments section.

For any alternative method, the inspector must confirm that such method is acceptable by contacting the OSRR UST Compliance Program Manager. If the method is acceptable, the inspector should check the box on the "Uses Board approved method" line. If the method is not acceptable, the inspector should leave the box blank and provide an explanation in the Comments section.

If the alternative method requires daily and/or monthly records, the inspector should review the records. If the records are present and complete or are not required for the method in question, the inspector should check the box to the right of "Complete" in the "Records" line of Section IV-Other Methods. If any records are absent or incorrect, the inspector should check the box to the right of "Incomplete." If no records at all were presented, the inspector should check the "No Records" box. Where the site contact did present records, the inspector should fill in the month and year for the months reviewed.

**3.4.2 Section V - Piping Release Detection - Detailed Review**

Section V of the Inspection Checklist addresses detailed technical requirements for piping release detection requirements for ACTIVE USTs.

**3.4.2.1 Release Detection for Pressurized and Gravity Fed Piping**

Release detection for pressurized piping consists of two components: (i) a device for automatically detecting line leaks and (ii) a periodic monitoring method.

**ALLD Type**

There are four ways to achieve automatic line leak detection: (i) automatic flow restrictors; (ii) automatic shut-off devices; (iii) continuous alarm system; or (iv) the ALLD system runs through an ATG. To complete the first part of Section V of the Inspection Checklist, the inspector must determine which type of ALLD is in place at the facility. Field verification is often possible. To verify whether the ALLD type present at the facility is either an automatic flow restrictor, an automatic shut-off device, or a continuous alarm system, the inspector should ask the site contact to remove the cover over the sump, point out the ALLD device and identify which type. To verify

that the ALLD type present at the facility is an ALLD system that runs through an ATG, the inspector should ask the site contact to point out the ATG module. Almost all ALLDs are flow restrictors---shut-off devices are very rare. Most electronic ALLDs are continuous alarms. The ALLD usually is the same brand as the ATG and the brand usually is clearly printed on the ALLD. If the ALLD and ATG are not the same brand, the inspector should verify that the ALLD and ATG are compatible.

When field verified, the inspector should then check the appropriate box to indicate which type of ALLD is present at the facility. Where field verification was not possible, the inspector must check the "Not field verified" box. Additionally, if the inspector relied on the STORMS data to verify an ALLD exists, then the inspector should check the "Form 7530 indicates present" box. Thus, where the inspector was not able to field verify an ALLD exists and no STORMS data verifies an ALLD exists, the "Not field verified" and "Form 7530 indicates present" boxes should both be blank. The inspector should fill in the ALLD manufacturer name and model name on the "Manufacturer / Model" line if the inspector is able to ascertain this information.

### **ALLD Records**

Except for some ATG type (electronic) ALLD equipment, owners are required to test their (mechanical) ALLD equipment annually to the manufacturer's requirements. ALLDs must be tested annually in accordance with manufacturer's requirements but not necessarily tested to any particular leak rate. The standard of 3 gallons per hour at 10 pounds per square inch within 1 hour is not the standard for the annual test but rather for the initial performance evaluation. Owners need to maintain any manufacturer required annual equipment test results for one year. Additionally, the owner is required to maintain the manufacturer's written performance claims related to the equipment.

The inspector should request the site contact to provide test records and manufacturer's written performance claims. If the ALLD was tested in the past year, the inspector should check the box on the "ALLD tested past year" line. If the ALLD was not tested, the inspector should leave the box blank and note the possible violation in the Comments section. The inspector also should fill in the date of the last ALLD test event in the indicated line and whether the ALLD passed the test by checking the appropriate box. If the ALLD failed the last test, the box should be left blank, and the inspector should provide a note in the Comments section. Inspectors should verify that the ALLD has been repaired or replaced.

For ATG systems in which the manufacturer's written performance claims state that annual testing is not necessary, the inspector should check the "Not required" box. For such systems, ALLD test records are not required. Proper functioning of the ALLD should be verified. This can be done (for example) by: (i) viewing the ATG to see that all functions are normal; (ii) if alarms are present, ensuring no alarm is activated; (iii) looking at ATG line leak self-test reports; or (iv) viewing an alarm history.

If ALLD test records are present and complete or are not required, the inspector should check the Yes box in the "Records" line of Section V-Release Detection for Pressurized Piping. Additionally, for systems where ALLD tests are not required, the inspector should mark the not required box. If any required records are absent or incorrect, the inspector should check the Incomplete box. If no records at all were presented, the inspector should check the No box.

### **Periodic Monitoring Methods**

Six types of periodic monitoring methods are used in conjunction with ALLDs: (i) annual line



tightness testing (ALTT); (ii) ATG monthly monitoring (0.2 gph leak tests conducted monthly); (iii) vapor monitoring; (iv) groundwater monitoring; (v) interstitial monitoring; and (vi) other approved methods, including SIR. The inspector should complete only the periodic monitoring subsection pertaining to the monitoring method used for the tank in question.

**a. ALTT**

The inspector should request the site contact to provide the ALTT records for the most recent testing event. If the records show the lines were tested within the last twelve months, the inspector should check the box on the "Lines tested in last 12 months" line. If not, this box should remain blank, and the inspector should note the absence of a current test.

For the test results the inspector is examining, the inspector should determine whether the lines passed the tightness test. If the results show that the lines passed, the inspector should check the box on the "Lines passed test" line. If the lines failed, the inspector should leave the box blank and make a note of the ALTT failure in the Comments section.

The inspector should insert the date of the last ALTT in MM, DD, YY order in the "Date last testing" line.

If ALTT test records are present and complete, the inspector should check the Yes box in the "ALTT Records" line. If any required records are absent or incorrect, the inspector should check the Incomplete box. If no records at all were presented, the inspector should check the No box.

**b. ATG**

For ATG systems, periodic monitoring can proceed in either of two ways: (i) monthly monitoring at a 0.2 gph leak rate, or (ii) an annual pipe test at a 0.1 gph leak rate. The inspector should review the ATG records to determine which method has been used and check the appropriate box in the ATG section under Monthly Monitoring on the Inspection Checklist, Section V. If neither was performed, the inspector should check neither box and should note the omission in the Comments section.

Where the monthly monitoring method was used, the inspector should note whether at least two months of data were presented by checking the "Monitoring data on file" box. If less than the required amount of data was presented, the inspector should leave the box blank and make a note in the Comments section.

Where the annual pipe test method was used, the inspector should note whether the lines passed the ATG test by checking the "Lines passed ATG test" box. If the lines failed, the inspector should leave the box blank and make a note in the Comments section.

The inspector should insert the date of the last monitoring event or pipe testing date by MM, DD, YY in the indicated blanks.

If the periodic ATG records are present and complete, the inspector should check the Yes box in the "ATG Records" line. If any required records are absent or incorrect, the inspector should check the Incomplete box. If no records at all were presented, the inspector should check the No box.

Where monthly monitoring was used, the inspector should enter the dates of the months of records reviewed.

**c. Vapor Monitoring**

Normally, owners who use vapor monitoring for their piping release detection will also use vapor monitoring for their tank release detection. Therefore, the records review performed for the tank

vapor monitoring section should have incorporated the piping monitoring results<sup>16</sup>. For such cases, where the tank vapor monitoring information demonstrated compliance, the inspector should check the "Vapor monitoring" box. If the tank vapor monitoring information demonstrated potential noncompliance, the details of the potential noncompliance issues should be noted (or cross-referenced with earlier comments) in the Comments section.

**d. Groundwater Monitoring**

Normally, owners who use groundwater monitoring for their piping release detection will also use groundwater monitoring for their tank release detection. Therefore, the records review performed for the tank groundwater monitoring section should have incorporated the piping monitoring results<sup>17</sup>. For such cases, where the tank groundwater monitoring information demonstrated compliance, the inspector should check the "Groundwater monitoring" box. If the tank groundwater monitoring information demonstrated potential noncompliance, the details of the potential noncompliance issues should be noted (or cross-referenced with earlier comments) in the Comments section.

**e. Interstitial Monitoring**

Interstitial monitoring entails evaluating the interstitial space between the piping and a secondary barrier immediately around or beneath the piping to determine if a release has occurred. This evaluation can be conducted through either (i) continuous or manual monitoring, or (ii) sampling. Sump sensors placed in the pump sump are often used. They usually run through an ATG or interstitial monitoring box. Some sump sensors have dual functions; they can function as ALLDs and also meet the requirement for an "other" method of monthly release detection. If the interstitial monitoring records are complete for the most recent two months and show no unreported releases, then the inspector should check the "Interstitial monitoring" box. Otherwise, the inspector should provide details regarding any potential noncompliance with respect to the interstitial monitoring in the Comments section.

**f. Other Approved Method (e.g. SIR)**

SIR that meets the release detection performance standard qualifies as an "other approved method." For other methods of piping release detection, the inspector should verify with the OSRR UST Compliance Manager that the alternate method is acceptable. If so, the inspector should verify that the system or method has been operated or conducted properly and acceptable records have been maintained. The "Other approved method . . ." box should be checked if these requirements are

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<sup>16</sup> If the owner uses vapor monitoring only for piping and not also for tanks at the facility, then the inspector should apply the review procedures set out under the tank release detection section for vapor monitoring. The inspector should check the piping vapor monitoring box only if the method is being performed in compliance with the requirements. If the method is not in full compliance, details of the noncompliance should be noted in the Comments section.

<sup>17</sup> If the owner uses ground water monitoring only for piping and not also for tanks at the facility, then the inspector should apply the review procedures set out under the tank release detection section for ground water monitoring. The inspector should check the piping ground water monitoring box only if the method is being performed in compliance with the requirements. If the method is not in full compliance, details of the noncompliance should be noted in the Comments section.

met. Otherwise, the box should remain blank and the inspector should note the details pertaining to the possible noncompliance in the Comments section.

### **3.4.2.2 Release Detection for Regulated Suction Piping**

For regulated suction piping, owners may satisfy release detection requirements in one of two ways: (i) conduct a line tightness test on the underground piping every three years and retain the records for three years; or (ii) perform a monthly monitoring method and retain the records for one year.

#### **Line Tightness Testing**

The formal line tightness testing review differs from the informal review in that the inspector not only verifies the presence of the required test results records but also conducts a detailed analysis of the records. To complete the Line Tightness Testing (LTT) section of Part V of the Inspection Checklist, the inspector first should check the box indicating which tanks use LTT for associated piping. For the applicable piping systems, the inspector requests the most recent 3-year test results records from the site contact.

The inspector must review the records to ensure LTT was performed at least every 3 years and showed a leak rate of no more than 0.1 gph at a 95% probability of detection with no more than a 5% probability of false alarm. Most testing firms specify this within their reports. If so, the inspector should check the box on the "Lines passed test" line. If not, the inspector should leave the box blank and note the failure in the Comments section. If the owner failed to report a release after a failed tightness test, the inspector should note such failure in the Comments section and forward the information to the remediation staff. Monthly monitoring at 0.2 gph can also qualify for this release detection requirement for suction piping.

On the "Date last testing" line the inspector should enter the date in MM, DD, YY order of the last tightness test. If the last tightness test was performed more than three years prior to the inspection date, the inspector should note the tardiness in the Comments section.

On the "LTT Records" line, the inspector should check Yes if all LTT records were present and timely. If any of the records were missing or tardy (i.e., more than three years old), then the inspector should check the Incomplete box. If no LTT records were available, the inspector should check No.

#### **Vapor monitoring**

Normally, owners who use vapor monitoring for their piping release detection will also use vapor monitoring for their tank release detection. Therefore, the records review performed for the tank vapor monitoring section should have incorporated the piping monitoring results<sup>18</sup> For such cases, where the tank vapor monitoring information demonstrated compliance, the inspector should check the "Vapor monitoring" box. If the tank vapor monitoring information demonstrated potential

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<sup>18</sup> If the owner uses vapor monitoring only for piping and not also for tanks at the facility, then the inspector should apply the review procedures set out under the tank release detection section for vapor monitoring. The inspector should check the piping vapor monitoring box only if the method is being performed in compliance with the requirements. If the method is not in full compliance, details of the noncompliance should be noted in the Comments section.

noncompliance, the details of the potential noncompliance issues should be noted (or cross-referenced with earlier comments) in the Comments section.

### **Groundwater monitoring**

Normally, owners who use groundwater monitoring for their piping release detection will also use groundwater monitoring for their tank release detection. Therefore, the records review performed for the tank groundwater monitoring section should have incorporated the piping monitoring results<sup>19</sup>. For such cases, where the tank groundwater monitoring information demonstrated compliance, the inspector should check the "Groundwater monitoring" box. If the tank groundwater monitoring information demonstrated potential noncompliance, the details of the potential noncompliance issues should be noted (or cross-referenced with earlier comments) in the Comments section.

### **Interstitial monitoring**

Interstitial monitoring entails evaluating the interstitial space between the piping and a secondary barrier immediately around or beneath the piping to determine if a release has occurred. This evaluation can be conducted through either (i) continuous or manual monitoring (visual check-ALLD needed), or (ii) sampling. If the interstitial monitoring records are complete for the most recent two months and show no unreported releases, then the inspector should check the "Interstitial monitoring" box. Otherwise, the inspector should provide details regarding any potential noncompliance with respect to the interstitial monitoring in the Comments section.

### **Other approved method (e.g. SIR)**

For other methods of piping release detection, the inspector should verify with the OSRR UST Compliance Manager that the alternate method is acceptable. If so, the inspector should verify that the system or method has been operated or conducted properly and acceptable records have been maintained. The "Other approved method . . ." box should be checked if these requirements are met. Otherwise, the box should remain blank and the inspector should note the details pertaining to the possible noncompliance in the Comments section.

## **3.4.3 Section VI - Corrosion Protection System - Detailed Review**

Section VI of the Inspection Checklist addresses detailed technical requirements for corrosion protection system requirements for ACTIVE USTs.

The corrosion protection requirements discussion that appears earlier in the manual under the informal inspection section explains that there are three basic methods used to provide corrosion protection to NEW tanks and piping: (i) the use of corrosion-resistant materials such as fiberglass

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<sup>19</sup> If the owner uses ground water monitoring only for piping and not also for tanks at the facility, then the inspector should apply the review procedures set out under the tank release detection section for ground water monitoring. The inspector should check the piping ground water monitoring box only if the method is being performed in compliance with the requirements. If the method is not in full compliance, details of the noncompliance should be noted in the Comments section.

for tank and pipe construction; (ii) the use of corrosion-resistant coatings plus cathodic protection; or (iii) the addition of a thick layer or "cladding" (>100 mils thickness) of corrosion-resistant material to the tank/piping. For tanks and piping originally installed without corrosion protection, three other methods are usually used: (i) the addition of cathodic protection; (ii) the addition of a lining to the tank interior; or (iii) the use of a combination of the two preceding methods. Where tanks/piping are constructed of corrosion-resistant materials, or where a thick (>100 mils) layer of corrosion-resistant material has been added to the tank/piping, no additional corrosion protection measures are required. Consequently, Section VI of the Inspection Checklist omits any reference to fiberglass, composite and secondary containment/double-walled tanks and/or piping as no in-depth review is required to ensure corrosion protection compliance for such tanks and/or piping.

The remaining categories, i.e., (i) cathodically protected metal (impressed or galvanic) and (ii) lined interior, are addressed in detail in the formal inspection section because both methods require follow up, including activities such as inspection of the lining or periodic testing of impressed current and galvanic cathodic protection systems.

### **3.4.3.1 Tank Corrosion Protection**

In the past, most tanks used cathodic protection to meet corrosion protection requirements. The most common of these tanks was Sti-P3 tanks. Sti-P3 tanks have three corrosion proofing components: (i) epoxy coating over the entire surface of a steel tank; (ii) sacrificial anodes attached to each end of the tank; and (iii) isolation bushings for pipe connections.

Other cathodically protected metal tanks (i.e., non-Sti-P3 tanks) may have achieved compliance through the addition of impressed current systems and/or sacrificial anodes. Additionally, some owners add impressed current systems to Sti-P3 tanks that have exhibited operating difficulty with the sacrificial anode system.

Other metal tanks were upgraded with internal linings of epoxy/fiberglass material to meet corrosion protection requirements.

#### **New/Existing Tank (Sti-P3)**

Where the tank is a Sti-P3 tank, the inspector should check the box on the "New/Existing Tank (Sti-P3)" line. To verify that the tank in question is a Sti-P3 tank, the inspector should ask the site contact to remove the sump cover. If the tank appears to have a coating (usually light blue or black epoxy), the inspector may assume the tank is a Sti-P3 tank. Other methods of field verification that may be used include presence of test wires at the fill port or of corrosion testing access ports or bill of sale/receipt addressed to the owner may indicate tank type. The tank owner may also have installation records, Sti-P3 warranty, installer's checklist, invoices, etc.

If these methods of field verification are not possible, the inspector may rely on STORMS data or representations made by the owner or site contact.

#### **Upgraded "Existing" Tank**

Where either the tank was originally installed without corrosion protection and was upgraded to include corrosion protection, or where impressed current was added to a Sti-P3 tank, the inspector should enter the date of the corrosion protection upgrade in MM, DD, YY order on the "Upgraded "Existing" Tank" line. This information may be obtained by interviewing the site contact or owner

or reviewing installation records that should be made available for the inspection. If the exact date is unknown, the inspector should enter as much of the date as is known (e.g., MM, YY or just YY). If the date is unknown, the inspector should enter UNK.

a. **Impressed Current**

Where the method used to upgrade an existing tank was impressed current, the inspector should check the box on the "Impressed Current" line. To verify that impressed current was installed, the inspector may look for saw cuts in the tank field pavement, a rectifier attached to a building at the facility (indoors or outdoors), wiring bundles tied to vent pipes, and anode hole covers in the tank field.

b. **Sacrificial Anode(s)**

Use of sacrificial anode systems are uncommon on existing bare steel tanks because anode systems alone usually are inadequate to protect the entire surface area of a tank. For example, some 800 pounds of anodes are required to properly protect a 1,000 gallon capacity bare steel tank. Consequently, use of sacrificial anodes is normally not cost effective-but such tank systems do exist rarely and can be compliant.

Where the owner has upgraded with a sacrificial anode system, the inspector should check the box on the "Sacrificial Anode(s)" line. To verify the existence of the sacrificial anode method, the inspector should look for sacrificial anode test port covers. Sometimes, anodes are installed and buried without access ports. Therefore, field verification is not always possible and the inspector may have to rely on STORMS data or installation documentation provided by the owner.

c. **Internal Lining**

If the method used to upgrade an existing tank was to line the interior of the tank, the inspector should check the box on the "Internal Lining" line. Field verification to determine presence of the internal lining is not possible. Therefore, the inspector may rely on STORMS data or installation documentation that the owner should provide.

## **Records**

### **System passed CP test (-0.85V or 100 mV depolarization)**

Within six months of installation (or repair of any cathodically protected UST system) and every three years thereafter, cathodic protection systems must be tested and must show a -0.85V or 100mV depolarization reading or better to pass. The inspector should ask the site contact to provide the most recent CP test. If the test showed an acceptable reading, the inspector should check the box on the "System passed CP test (-0.85V / 100 mV depolarization)" line. If either the test was dated (more than three years old), not recorded according to a national standard procedure/practice, or the system failed to pass, the inspector should leave the box blank and note relevant details in the Comments section. (A test report that indicates the system "passed" in accordance with a code of practice developed by a nationally recognized association (NACE) and was performed by a cathodic protection tester or more qualified individual is acceptable.)

Alternative to the -0.85V CP test is the 100mV depolarization test. If the test showed the system passed 100mv depolarization test", the inspector should check the box for impressed current. In general, national corrosion standards and codes provide for what is often called an "instant off" depolarization test that generally shows the structure may be protected if the resulting "drop"

between "instant off" and "depolarization" is greater than 100 millivolts. (Some corrosion experts utilize the pre-upgrade native potentials of the metallic structure to substitute for the depolarization value in calculating protection.) Experts and the NACE standard do not recommend simply testing an impressed current system with the system "on" without taking into account the IR (voltage) drop.

CP tests are required for Sti-P 3 tanks. If a tank owner is not maintaining an internal tank liner and also has CP, then a CP test is required. If the liner is the sole method of corrosion protection or is being properly maintained, then a CP test does not need to be conducted (but the lining must be checked 10 years after installation and every 5 years thereafter). Most lined tanks also have CP. Tank owners usually maintain the CP instead of the liner (to avoid conducting the periodic 10 year and 5 year inspections).

#### **Date of most recent test**

The inspector should insert the date of the most recent CP test in MM, DD, YY order in the "Date of most recent test" line. If no test records are presented the inspector should write UNK, NONE or leave blank.

#### **Inspection every 60 days**

For impressed current cathodic protection systems, inspections every 60 days are required to ensure the equipment is running properly. In order to ensure that the rectifier is running properly, the tank owner would check that the rectifier is on and has appropriate voltage and amperage. Some rectifiers do not record volts and amps. The owner is required to keep records documenting that such inspections occurred. The inspector should request the two most recent 60 day inspection documents. If both are provided and appear to document that an inspection occurred, the inspector should check the box on the "Inspection every 60 days" line. If one or both documents are omitted (a log of 60 day checks and 3 year test results is acceptable) or it did not appear that an adequate inspection occurred, the inspector should leave the box blank and provide details in the Comments section. If the documents suggest the impressed current cathodic protection system is not operating properly (low amps, power out, etc.), the inspector should note the problem in the Comments section.

#### **Record of passing post-system failure test on file**

Where a cathodic protection system requires repair, the system must be tested within six months.

In such cases, the inspector should request the test and ensure that it reflects a passing result. If the test was timely and reflects that the system passed, the inspector should check the box on the "Record of post-system failure test on file" line. If the test was absent, tardy or reflects a failure, the inspector should leave the box blank and insert the details in the Comments section.

On the "Records" line, the inspector should check Yes if all records were present and timely. If any of the records were missing or tardy, then the inspector should check the Incomplete box. If no records were available, the inspector should check No.

#### **Internal lining 10yr/5yr warranty check**

Where lining is the chosen method of complying with corrosion protection, the installed lining must be inspected after 10 years and every 5 years thereafter (common warranty periods). If the inspection was timely and reflects that the system passed, the inspector should check the box on the "internal lining 10yr/5yr warranty check" line. If the inspection was absent, tardy, or reflects

failure, the inspector should leave the box blank and insert the details in the comments section. If all the requested records were presented and were complete, the inspector should check the Yes box on the "Records" line. If no records were presented, the inspector should check the No box. If incomplete records were presented, the inspector should check the Incomplete box. The inspector also should insert the month and year for the two sets of 60-day inspection documents reviewed for impressed current systems.

## **Existing tanks upgraded with cathodic protection**

### **Acceptable tank assessment done prior**

A tank assessment to identify corrosion holes in the tank is required for tanks that were not originally installed with corrosion protection and that were later upgraded with cathodic protection and/or for unverified (by old CP test results, tank warranty, or sworn affidavit) Sti-P3 tanks to which impressed current cathodic protection has been added. Four categories of methods to conduct the assessments are permitted: (i) an internal tank inspection and assessment; (ii) monthly monitoring for tanks less than ten years old at the time of the upgrade; (iii) tightness tests at designated times for tanks less than ten years old at the time of the upgrade; or (iv) other approved methods. For upgraded tanks, the inspector should review the tank assessment that should have been performed in conjunction with the upgrade. If the tank assessment was performed properly, and the tank passed the assessment, then the inspector should circle "Yes" on the "Acceptable tank assessment done prior" line.

If either the assessment is absent, was performed improperly, or documents an integrity problem with the tank, then the inspector should circle "No" and provide a note in the Comments section. Where integrity problems were noted, the inspector should ask the site contact to produce records documenting repair of the integrity problems before the cathodic protection was installed. If such proof cannot be provided, the inspector should document the problem in the Comments section. If the integrity problem appeared to be remedied prior to cathodic protection installation, the inspector should provide a note to this effect in the Comments section.

Where the owner performed the assessment, the inspector should indicate which assessment method was used, by checking the appropriate box as indicated below. Additionally, the inspector should ensure the owner met the requirements applicable to the use of the type of assessment selected, which also are indicated as follows:

#### **Tank <10 years old at time of upgrade: monthly monitoring.**

This method may be used only for tanks ten years old or less at the time of the upgrade. If the tank was more than ten years old at the time of the upgrade, the inspector should leave the box blank and note in the Comments section that this is an ineligible assessment method for the tank.

For tanks that were less than ten years old at the time of the upgrade, certain types of release detection are nonetheless unacceptable. Specifically, IC (+ TTT) and MTG are not acceptable methods of release detection to assess integrity of cathodically protected tanks. Therefore, the inspector should check the monthly monitoring box only if the release detection method used was either ATG, vapor monitoring, groundwater monitoring, interstitial monitoring, or other approved method (SIR) and only if the method was performed properly. If either the method was performed improperly or an unacceptable method was used, the inspector should leave the box blank and provide a note in the Comments section documenting the owner's attempt to use monthly monitoring and providing the reason the attempted monitoring is not acceptable.



**Tank <10 years old at time of upgrade: TTT prior + 6 mos. after upgrade**

This method may be used only for tanks ten years old or less at the time of the upgrade. If the tank was more than ten years old at the time of the upgrade, the inspector should leave the box blank and note in the Comments section that this is an ineligible assessment method for the tank.

This method required a TTT prior (within 30 days) to the installation of the cathodic protection and within six months of the upgrade. ATG and SIR are acceptable TTT (0.1 gph) methods. For eligible tanks, the inspector should check this box if both tests were performed in a timely manner and showed passing results. If either or both tests were tardy or missing, the inspector should leave the box blank and provide a note in the Comments section documenting the owner's attempted use of TTT and explaining why the TTT is not acceptable. Additionally, the inspector should note the owner's follow up measures where the tank failed either or both TTTs. Finally, the inspector should document the TTT dates in MM, DD, YY order, where such information is available.

**Internally Inspected**

Internal inspection and assessment may be used regardless of tank age. The inspector should check this box where the assessment used was internal inspection and was performed properly. If the assessment indicates the assessment was deficient (e.g., too many corrosion holes for repair, etc.), the inspector should leave the box blank and make a note in the Comments section explaining why the attempted internal inspection was inadequate.

**ASTM ES40-94 et seq.**

The professional testing protocols listed in Section VI of the Inspection Checklist are approved assessment methods under 9 VAC 25-580-60.2.b.4. that may be used with tanks regardless of their age at the time of upgrade. The inspector should review the results of assessments performed according to these protocols. If the results show the tank had no integrity problems and the assessments appear to have been conducted properly, the inspector should check the appropriate box.

If either the assessment method appeared to have been conducted improperly (e.g., method not valid on date of assessment) or showed an integrity problem, the inspector should leave the box blank, note the attempted method in the Comments section, and provide details regarding the problem.

**3.4.3.2 Piping Cathodic Protection**

Where piping is not constructed of corrosion-resistant material<sup>20</sup> (e.g., metallic pipe), cathodic protection is used to provide corrosion protection.

**New Metallic Piping w/anodes or Impressed Current**

The two forms of cathodic protection are impressed current and galvanic (which employs sacrificial anodes). For new piping, most owners use corrosion-resistant material; therefore, it is unlikely the inspector will encounter a facility with new metallic piping. However, in the event the inspector

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<sup>20</sup> Lining is impracticable for piping; therefore, lining is not used as a compliance option for piping corrosion protection.

does encounter such a facility, the inspector should check the box for the "New Metallic Piping w/anodes or Impressed Current" line for the appropriate tank.

### **Upgraded Piping**

Normally, cathodically protected piping will occur in conjunction with existing, as opposed to new, piping. Where the inspector encounters this type of piping at a facility, the inspector should fill in the upgrade date in the indicated line in MM, DD, YY order and check the box for either "Impressed Current" or "Sacrificial Anodes" to indicate which type of cathodic protection is used. Because piping has a smaller surface area requiring protection than a tank, sacrificial anodes can be a cost-effective system. To field verify piping sacrificial anodes, the inspector should look for anode test ports or wires attached to the tank at the fill port. If it is not possible to perform field verification, the inspector may rely on STORMS data or any installation records the site contact may present.

Coated and/or wrapped pipe (field/factory) alone is not compliant unless a third party certification exists for the pipe design. Commonly compliance is achieved through use of both a coating and the addition of sacrificial anodes in accordance with a national standard (NACE, UL) or the piping system is designed and certified by a corrosion expert.

To verify impressed current cathodic protection, the inspector should look for a wall-mounted rectifier, saw cuts in the asphalt along the piping runs, bundles of wiring tied to vent lines, or wiring systems in access ports.

### **Records**

#### **System passed CP test (-0.85V or 100mV depolarization test)**

Within six months of installation (or repair of a cathodically protected UST system) and every three years thereafter, cathodic protection systems must be tested and must show a -0.85V or 100mV depolarization reading or better to pass. The inspector should ask the site contact to provide the most recent CP test. If the test showed an acceptable reading, the inspector should check the box on the "System passed CP test (-0.85V/100mV)" line. If either the test was dated (more than three years old), not recorded according to a national standard procedure/practice, or the system failed to pass, the inspector should leave the box blank and note relevant details in the Comments section. (A test report that indicates the system "passed" in accordance with a code of practice developed by a nationally recognized association (NACE) and was performed by a cathodic protection tester or more qualified individual is acceptable.)

#### **Date of most recent test**

The inspector should insert the date of the most recent CP test in MM, DD, YY order in the "Date of most recent test" line. If no test records are presented the inspector should write UNK, NONE or leave blank.

#### **Inspection every 60 days**

For impressed current cathodic protection systems, inspections every 60 days are required to ensure the equipment is running properly. The owner is required to keep records documenting that such inspections occurred. The inspector should request the two most recent 60 day inspection documents. If both are provided and appear to document that an inspection occurred, the inspector should check the box on the "Inspection every 60 days" line. If one or both documents are omitted

or it did not appear that an adequate inspection occurred, the inspector should leave the box blank and provide details in the Comments section. If the documents suggest the impressed current cathodic protection system is not operating properly, the inspector should note the problem in the Comments section.

If all the requested records were presented and were complete, the inspector should check the Complete box on the "Records" line. If no records were presented, the inspector should check the No Records box. If incomplete records were presented, the inspector should check the Incomplete box. The inspector also should insert the month and year for the two sets of 60-day inspection documents reviewed for impressed current systems.

#### **Record of passing post-system failure test on file**

Where a cathodic protection system requires repair, the system must be tested within six months according to a national standard code procedure such as NACE RP0285-95. In such cases, the inspector should request the test and ensure that it reflects a passing result. If the test was timely and reflects that the system passed, the inspector should check the box on the "Record of post-system failure test on file" line. If the test was absent, tardy or reflects a failure, the inspector should leave the box blank and insert the details in the Comments section.

On the "Records" line, the inspector should check Yes if all records were present and timely. If any of the records were missing or tardy, then the inspector should check the Incomplete box. If no records were available, the inspector should check No.

### **3.4.4 Section VII - UST System Description - Inactive (Improperly Closed) USTs**

Section VII of the Inspection Checklist addresses detailed technical requirements for INACTIVE USTs that were improperly closed.

#### **General Information**

To complete this section, the inspector will interview the site contact. For each inactive improperly closed UST, the inspector should assign a tank designation number and enter it into the "Closed Tank #" line. If the closed tanks were registered, the number used in STORMS should also be used on the checklist to avoid confusion concerning which tanks were closed. For each such tank, the inspector should enter the date the tank was closed or went out of service in MM, DD, YY order to the extent such information is known. MM, YY or YY is acceptable if more detailed information is unavailable. The inspector should enter UNK where the date of last use is not known.

If the site contact has the information, the inspector should enter the tank capacity and substance last stored on the appropriate lines. The inspector can determine whether the tank was closed without notifying DEQ by checking the STORMS database and should then check the appropriate line if STORMS lacks closure information for the tank in question. If there is a registration backlog, the inspector should also check the backlog spreadsheet prior to the site visit. It is also very helpful to check the RO files to ensure that the closure information is not in the regional office (but has not been properly forwarded to OSRR for STORMS entry).

To determine the number of USTs closed prior to 12/22/88, the inspector should check the STORMS records and interview the site contact. After resolving any inconsistencies in these two information sources, the inspector should enter the correct number of USTs closed (cessation of use) prior to 12/22/88 (that remain in the ground at the facility) yet remain "currently in use" on

STORMS on the appropriate line in Section VII of the Inspection Checklist. The inspector also should enter the name, address and phone number of the owner(s) of all closed tanks at the facility. Details regarding resolution of inconsistent information may be recorded in the Comments section.

### **Facility Site Sketch**

The inspector should draw a sketch of the site on the back of the last page of the Inspection Checklist. The sketch should show:

- all product lines (as best as can be determined);
- all dispensers;
- fill ports;
- ALLDs;
- observation or monitoring wells;
- ATG units/panels;
- interstitial monitoring points;
- vapor recovery units;
- cathodic protection testing sites;
- impressed current panels (rectifiers); and
- obvious site features such as streets and buildings.

## **4. Post-Inspection Procedures**

### **4.1 Site Visit**

Following the site visit, the inspector need only determine whether proceeding to an informal or formal inspection of the facility is merited. Regional management will determine the degree of discretion inspectors may use in making such decisions.

### **4.2 Post-inspection Procedures Common to Both Informal and Formal Inspections**

#### **4.2.1 Review Inspection Checklist to determine if follow up is necessary and perform such follow up.**

After both informal and formal inspections, the inspector should review the inspection checklist to determine if any follow up with the facility owner is necessary. Examples in which follow up may be necessary occur where the owner or site contact lacked required records at the time of the inspection and requested the opportunity to provide them after the inspection, or where the owner or site contact offered to address a potential noncompliance issue immediately. This may occur where a test is required or a system needs repair and the owner agrees to perform the test or repair promptly.

#### **4.2.2 Begin any enforcement activity required.**

Where the inspector documented apparent violations, enforcement activities, as described in the DEQ Enforcement Manual, must commence.

#### **4.2.3 Compare data against STORMS to identify and resolve discrepancies.**

The inspector will compare the observations the inspector made at the site to the information reported from the Form 7530-1 in the STORMS database. If discrepancies exist, the inspector will follow up with the owner to ensure the owner files an amended Notification Form 7530-1 reflecting current information.

#### **4.2.4 Perform data entry in the STORMS or Regional Office inspection module.**

The inspector will perform data entry of the inspection results in the inspection module of the STORMS (or the Regional Office) database.

### **4.3 Formal Inspections**

For formal inspections, one additional post-inspection activity is required. Specifically, it is anticipated that inspectors will perform the detailed records reviews and the corresponding parts of the Inspection Checklist after the actual inspection at the site.

## **5. Regulatory Interpretations**

### **5.1 Regulatory Decision Tree for USTs**

Answering the questions below in the sequence they are presented will establish whether or not the UST Technical Regulation applies to a given tank, and the extent to which the tank is regulated.

**Important Note:** To determine whether or not an UST is subject to the regulation, this section must be read in its entirety, starting at the beginning and continuing until reaching a stop point. No question can be answered without completing all questions that precede it, in the order in which they are presented.

1.) Is the device a tank? Meaning is it a "stationary containment device made of non-earthen materials?"

A pit, pond, lagoon, surface impoundment, topographic depression, excavation, or diked area made, or made primarily, of earthen materials would not be considered to be a tank. An earthen structure lined with man-made material that provides no structural support also would not be considered to be a tank.

If the answer is **'NO,'** then **STOP HERE.** The object is not considered a tank. There are no applicable regulatory requirements under the UST Technical Regulation.

2.) Is the tank an underground tank? Specifically, is/was 10% or more of the volume of the tank (or the volume of all tanks in combination), including the volume of the connected underground piping, below the surface of the ground?

Tank systems (tank and associated piping) located above the floor in an "underground area" (basement, tunnel, drift, etc.) with enough space for physical inspection of the tank exterior are not considered to be underground tanks. (See Exemption #9 in the definition of an UST in Article 9 of the State Water Control Law (SWCL).)

Unless the owner/operator can produce reliable documentation which demonstrates contrary volumes/percentages, DEQ assumes that a tank system is an UST if it appears to the inspector that the underground portion of the tank equals or exceeds 10%.

When ASTs and USTs are connected the "valve rule" applies. This rule allows for ASTs and USTs to be handled separately based on the separation "valve."

If the answer is **'NO,'** then **STOP HERE**. This is not an underground storage tank. There are no applicable regulatory requirements under the UST Technical Regulation. (Refer to AST regulatory requirements.)

3.) Does the underground tank contain a "regulated substance?"

The term "regulated substance" is defined in Article 9 of SWCL to mean any one or a combination of the following:

a.) A substance listed in §101(14) of CERCLA (42 USC § 9601 et seq.)

This list is available on the Web at:

<http://www.epa.gov/swrust1/fedlaws/cfr.htm#40cfr302.4>.

b.) Petroleum, including crude oil or any fraction thereof, that is liquid at standard conditions of temperature and pressure (60 degrees F and 14.7 pounds per square inch absolute), and

c.) Petroleum-based substances comprised of a complex blend of hydrocarbons derived from crude oil through a process of separation, conversion, upgrading, and finishing, such as motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents, and used oils. (See Section 3.3 for further information about "petroleum based" substances.)

If the answer is **'NO,'** then **STOP HERE**. There are no applicable regulatory requirements under the UST Technical Regulation.

4.) Is the underground tank one of the types that were specifically not included in the SWCL definition of an UST and from the regulations promulgated under Article 9 of the SWCL?

Types of tanks or structures, which are not included in the definition of an UST, are:

- A farm or residential tank of 1,100 gallons or less capacity used for storing motor fuel for noncommercial purposes.
- A tank used for storing heating oil for consumption on the premises where stored.
- A septic tank (as defined in the regulation).
- A regulated pipeline facility (including gathering lines) which is regulated under (for interstate pipelines) the Natural Gas Pipeline Safety Act of 1968 (49 USC App. 1671 et seq.) or the Hazardous Liquid Pipeline Safety Act of 1979 (49 USC App. 2001 et seq.), or (for intrastate pipelines) comparable state laws.

- A stormwater collection system defined in the regulation as a system which "transports surface water resulting from precipitation to or from a retention area or an area where treatment is designated to occur." Stormwater treatment systems are not stormwater collection systems.

or

- A wastewater collection system, defined in the regulation as a system which "transports domestic, commercial, or industrial wastewater to or from retention areas where treatment is designated to occur." Wastewater treatment systems are not wastewater collection systems and are addressed later, in question 6.

- A flow-through process tank (as defined in the regulation).

- A liquid trap or gathering line which is directly related to oil or gas production and gathering operations.

- A tank situated in an underground area such as a basement, cellar, mineworking, drift, shaft, or tunnel if ...situated above the floor.

- Surface impoundments, pits, ponds, or lagoons.

If the answer is **"YES,"** then **STOP HERE.** The tank is an "Exempt UST." There are no applicable regulatory requirements under the UST Technical Regulation.

5.) If the tank already has been removed from the ground, continue on to Question 5a. If the tank is still in the ground, skip Questions 5a through 5c and go on to Question 6.

5a. Was the underground tank removed from the ground before May 8, 1986? The answer to this question should be confirmed by reviewing the DEQ registration files/STORMS database. There was no requirement to register tanks removed before May 8, 1986. If the tank was still in the ground on or after May 8, 1986, go to question 5c.

5b. If the owner states that the tank was removed from the ground prior to May 8, 1986, does a check of the database yield any conflicting information?

If there is not any contradictory information in the database, then **STOP HERE.** From a regulatory standpoint, this tank never existed, and there are no applicable regulatory requirements under the UST Technical Regulation (except under 9 VAC 25-580-340-Applicability to previously closed UST systems).

The Virginia UST Technical Regulation requires owners/operators to notify VDEQ of (i.e., register) any tank known to ever have been in existence. However, for tanks removed from the ground prior to October 25, 1989, the VA UST Technical Regulation does not require the tank to have been "properly" closed, or even require the VDEQ to have been notified of its removal if closed prior to December 22, 1988. These "gaps" in the regulatory requirements have the potential to cause considerable quality control problems for the VDEQ registration database. Because the registration of tanks long since removed from the ground has been judged to provide no real environmental benefit, VDEQ by policy waives any requirement to initially register these "pre-'86 tanks", and simply requires that the tank owner/operator submit proper registration documentation of the tank's closure.

If there is contradictory information in the database (indicating that the tank was in the ground after May 8, 1986) then the owner/operator must resolve the contradictory statements in order to determine which regulatory requirements apply. At a minimum, the owner must provide to VDEQ:

- Written certification that an error was made in the initial registration documentation (in order to create a "paper trail" for correcting the existing registration files), and
- Proper closure documentation for the tank (see Registration and Notifications section of this manual).

**STOP HERE.** The UST has been properly closed once the owner/operator has complied with 1) and 2) above. There are no other requirements applicable under the Virginia UST Technical Regulation.

5c. For tanks removed from the ground on or after May 8, 1986, the owner/operator must provide to VDEQ proper registration (and closure documentation if removed after 10/25/89) for the tank (see Registration and Notifications section of this manual.) Once the owner/operator has complied with this requirement, **STOP HERE.** There are no other requirements applicable under the VA UST Technical Regulation.

6.) Is the tank one of the following types of UST systems that are specifically "excluded" from the UST Technical Regulation's requirements by 9 VAC 25-580-20?

- An UST system being regulated by the VDEQ's Hazardous Waste Program because it contains hazardous wastes (i.e., substances listed or identified under Subtitle C of the Solid Waste Disposal Act (33 USC §1251 et seq.)

Important Note: If in doubt, contact the DEQ Hazardous Waste Program. Even in cases where the stored substance is a mixture of a RCRA Subtitle I substance (i.e., petroleum or a CERCLA listed substance) combined with only trace amounts of a RCRA Subtitle C substance, the tank may be regulated as a RCRA Subtitle C hazardous waste tank.

- A wastewater treatment tank system that is part of a wastewater treatment facility regulated under §402 or §307(b) (i.e., VPDES and pre-treatment permits) of the Clean Water Act.
- An [item of] equipment or machinery that contains regulated substances for operational purposes (e.g., hydraulic lift tanks, electrical equipment tanks, etc.)
- An UST system that has a capacity of 110 gallons or less.
- An UST which contains a de minimis (as that term is used in the preamble of 40 CFR 280, ( 53 Fed. Reg. 37108-37109) amount of regulated substances. This explanation incorporates consideration of tank size/ containment time/ amount /concentration) quantity of "regulated substance(s)."

If the answer is "YES," then **STOP HERE.** There are no applicable regulatory requirements under the UST Technical Regulation.



7.) Is the tank one of the following types of "deferred" tanks?

- A wastewater treatment tank system [that is not regulated by the Clean Water Act §§402 or 307b]
- An UST system containing radioactive material that is regulated under the Atomic Energy Act of 1954 (42 USC 2011 et seq.)
- UST system that is part of an emergency generator system at a nuclear power generation facility regulated by the Nuclear Regulatory Commission under 10 CFR 50, Appendix A
- An airport hydrant fuel distribution system
- UST system with field-constructed tanks

If the answer is "YES," then **STOP HERE**. This type of UST is a "Part C Deferred UST" which is "partially regulated" by the VA UST Technical Regulation. It must comply with Part I (interim prohibition) and Part VI (Release Response and Corrective Action) of the 9 VAC 25-580 requirements --- Release Response and Corrective Action --- but is not required to comply with Parts II, III, IV, V and VII.

8.) Does the UST store fuel, which is only used by an emergency power generator(s)?

If the answer is "YES," then **STOP HERE**. The tank is an "emergency generator" tank. It must comply with all of the requirements in Parts II, III, V, VI and VII of the VA UST Technical Regulation, but is deferred from the requirements of Part IV - Release Detection.

If you have answered all the preceding questions and arrived at this point (i.e., If the answer to question #8 was "NO"), then the tank must comply with all of the requirements in Parts I, II, III, IV, V, VI, and VII of the VA UST Technical Regulation.

## 5.2 "Regulated Substance" Interpretations by DEQ

Congress, EPA, the General Assembly, and DEQ all recognize that even the best statutory/regulatory language is subject to some interpretation. As the "implementing Agency" for the UST Technical Regulation, DEQ must make interpretations related to USTs. To do so, DEQ relies primarily on the collective common sense and professional judgment of its Regional Office and Central Office Petroleum Program staffs, and also on EPA staff, the preamble to the Federal UST Regulation, and previously published EPA interpretations.

Products that have been determined by the DEQ Tank Program to be "petroleum based substances" (therefore regulated) include:

- Varsol (also called "mineral spirits" or "petroleum solvents"),
- Paraffin, and

- Naphtha

There are many substances that are neither petroleum nor CERCLA listed, and thus are unregulated at this time.

Example: Propylene Glycol (a product used for airliner deicing).

### **5.3 "Use" Interpretations**

DEQ often must interpret the applicability of the UST regulations because of questions posed by the use of a particular tank. Tank use determinations made by DEQ are described in the following paragraphs.

#### **Airport Hydrant Fueling Systems (AHFS)**

AHFSs are used at many large metropolitan airports and some military air bases. AHFSs are typically large piping systems that supply vast quantities of fuel to airport terminals. Where the storage of fuel is in USTs, the AHFSs are regulated as USTs that are deferred from UST technical requirements (Parts II, III, IV, V and VII of 9 VAC 25-580-10 et seq.). Such AHFSs are subject to UST release response and corrective action requirements (Part VI of 9 VAC 25-580-10 et seq.). Where the storage of fuel is in ASTs, the AHFSs are regulated as ASTs under the Facility and Aboveground Storage Tank Regulation, 9 VAC 25-91-10 et seq.

#### **"Dual Use" or "Multiple Use" USTs**

Many USTs contain fuel that is used for multiple purposes. In such cases, the use with the most restrictive (environmentally protective) regulatory standard is the use that governs. A tank used for both regulated and unregulated purposes is therefore considered a regulated UST, and a tank used for a partially regulated purpose and a fully regulated purpose would be considered fully regulated. For example, many hospitals and public facilities have oil storage tanks, the contents of which are used for two purposes: (1) to heat the premises (an unregulated use) and (2) to power an emergency generator (a partially regulated use). Such tanks are treated as regulated emergency generator USTs.

#### **"Spill Containment" USTs**

Many facilities have USTs that are used to contain petroleum product spills, which occur during the loading and unloading of ASTs or vehicles. These "spill containment" tanks often are not emptied until they have nearly reached their oil storage capacity. If a spill containment tank is not emptied "expeditiously" (within 24 hours of each spill) then the tank is considered to be a used oil UST and is fully regulated.

#### **"Farm Use Motor Fuel" Interpretations for USTs**

A "farm use motor fuel" UST having a capacity of 1,100 gallons or less is exempt from (UST not subject to) the requirements of the UST Technical Regulation.

"Farm use motor fuel USTs" must be both 1) located on a farm, and 2) contain motor fuel solely for use by the farm (not resold to another entity).

Use by the farm is assumed by DEQ for motor fuel used in:

- vehicles titled/licensed in the name of the farm,
- vehicles licensed by DMV as farm-use vehicles,
- motorized equipment used in crop or animal production.

Any doubts about a location's qualification as a farm often can be resolved by asking for the tank owner's latest tax forms which were filed with the Internal Revenue Service (IRS). Farm income is reported on Schedule F. If the tank owner used a Schedule F to report income from the operation, then the operation is considered a farm by DEQ. In accordance with the preamble to the UST regulations (40 CFR 280), farms can be orchards, Christmas tree farms, greenhouses (nurseries with growing operations; not nurseries in retail stores), and fish farms. Golf courses and other recreational facilities are not farms.

### **"Residential Use Motor Fuel" Interpretations for USTs**

Tanks with a capacity of 1,100 gallons or less which contain motor fuel for residential use are exempt from the requirements of the UST Technical Regulation. Typically, these are tanks containing fuel for use in private automobiles, lawn equipment, recreational vehicles, and equipment, etc.

"Residential use" applies only to tanks that are located at one and two family dwelling units. This interpretation is consistent with the BOCA National Fire Prevention Code. Tanks located at apartments, condominiums, hotels, and retirement communities have been determined by EPA to be regulated (not exempt). However, in the UST Technical Compendium

(<http://www.epa.gov/swerust1/compend/index.htm>) EPA has also said that a small motor fuel tank located at a monastery is an exempt UST.

Tanks located at military bases, colleges, and universities, however, have been determined by EPA to be regulated (not exempt) because the primary purpose of these facilities is not for use as a dwelling.

Even if the tank is located at a residence, the motor fuel cannot be used for commercial purposes. If the fuel is resold or is supplied to vehicles used in a business (such as a kennel, funeral home, or catering business), the tank is not an exempt UST.

### **"Field Constructed" USTs**

Field constructed USTs are typically large USTs that are constructed in the ground from concrete or other materials. These USTs are regulated as field constructed tanks regardless of how they are used.

### **"Heating Oil" USTs**

The term "heating oil UST" is commonly used to describe a tank that is exempt from both the federal and state UST regulations because it contains heating oil solely for consumption on the premises where stored.

Virginia law (Article 9, effective July 1, 1987) regulated heating oil USTs greater than 5,000 gallons in size, but this requirement was deleted on July 1, 1996. Now all heating oil USTs, regardless of size, are exempted from regulation (if the product is consumed on the premises). Although the UST Technical Regulation has not yet been amended (as of September 2001) to reflect this change, the 1996 amendment to the State Water Control Law effectively supersedes the regulation.

All such tanks closed prior to 7/1/96 must have followed the proper closure requirements for removed tanks.

### **Interpretations of "Heating Oil"**

"Heating oil" is an imprecise term with no clear definition either in industry parlance or in the UST regulation, yet it is used in several different places within the State Water Control Law and the State Tax Law. This has resulted in the need for extensive interpretation by DEQ and by DMV. Unfortunately, the language of these statutes currently makes it impossible for the term to be interpreted consistently across each of the four different regulatory/statutory contexts in which it appears (i.e., Release Remediation, Tank Compliance, VPSTF Reimbursement, and VPSTF Fees.) Only the interpretation of Heating Oil in its Tank Compliance context is addressed here.

"Heating oil", when used in the UST and AST compliance context means:

- #2 grade fuel oil marketed as "heating oil,"
- a grade of fuel oil not normally marketed as "heating oil" but being used for that purpose (i.e., for heating the ambient air in work or living spaces), or
- oil of any grade or type if the only purpose of its combustion is to capture the heat energy produced (rather than the kinetic energy from the expanding gases.)

Some examples of fuel interpreted to be "heating oil" under this part of the definition are the fuel used to create steam for removing feathers from turkeys, the fuel used in a crematorium's ovens, and the fuel burned to supply heat in a chemical manufacturing process.

"Any grade or type" of petroleum can include used or waste oil. However, if any of the oil is removed from the tank for recycling or disposal rather than for consumption on the premises where stored, as heating oil, the tank becomes regulated as a "multiple use" tank. (See discussion of "dual use or multiple use tanks" above.)

### **"Consumed On The Premises Where Stored" USTs**

"Consumed on the premises where stored" is interpreted to mean that the combustion of the fuel oil takes place within the geographical boundaries of the facility at which the UST is located[CoV19].

### **Hydraulic Lift Tanks**

Hydraulic lift system tanks containing petroleum products are included in the definition of an UST and must have been registered in accordance with the requirements contained in Article 9 (by May 8, 1986). However, UST hydraulic lift systems are excluded from all other UST regulatory requirements as of the EPA UST regulations, effective 12/22/88.

### **Oil/Water Separators**

Oil/water separators, which fit the definition of an UST, are nevertheless excluded from all of the UST regulatory requirements. This is because an oil/water separator is typically part of a wastewater treatment facility that is regulated under Section 402 or 307(b) of the Clean Water Act. DEQ issues Virginia Pollution Discharge Elimination System (VPDES) permits for these USTs. Because these USTs are regulated under the Water Permit Program rather than the UST Program, they do not have to comply with the UST Regulations.

### **"Used Oil" vs. "Waste Oil"**

Used Oil USTs are those that contain only used oil that has been drained from motor vehicle engines. Any mixture with another product (antifreeze, gasoline, solvents, engine cleaning compounds, transmission fluid, etc.) disqualifies it as Used Oil. Used oil tanks are regulated USTs (if over 110 gallons).

"Waste Oil USTs" are those which contain a mixture of oil products. Waste oil tanks are regulated, either by the UST program or by the Waste Program, depending on the substances they contain.

For the inspector who is not equipped with sophisticated sampling gear, on site judgements about whether a tank contains Waste Oil or Used Oil often come down to a visual inspection of the tank installation and speculation about how it is being used at the facility. Used oil USTs usually do not have pumps or dispensing units and are usually filled by funneling or draining (small quantities of engine crankcase oil directly into the fill-pipe of the tank). Typically, used oil tank systems consist of a simple gravity line leading from a drain pan to a tank which is pumped periodically into a tank truck equipped with a pump or vacuum system.

If it appears that a drain-pan in an oil-changing bay is the only method by which product is put into the tank, the inspector may conclude that the tank contains only motor oil and is therefore a used oil tank. If the tank fill port is "around back" of the building and it looks like workers habitually use it to dispose of all manner of liquid waste, it is likely that the tank is actually a waste oil tank.

Waste oil tanks should be referred to Waste Program staff in the region for evaluation.

## **5.4 EPA Interpretations**

A resource that DEQ staff can use for assistance in making UST regulation applicability interpretations is the Compendium of Regulatory Interpretations that EPA has developed since the inception of the UST Program in 1984. The Compendium can be found on the Internet. The EPA web site address is: <http://www.epa.gov/swerust1/compend/index.htm>.

EPA has categorized the interpretations in the Compendium under the following headings:

- Applicability, Definitions, Notification;
- New/Upgraded UST Systems;
- Release Detection;
- Release Investigation, Confirmation, and Corrective Action;
- Closure; and
- Financial Responsibility (FR).



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## **VOLUME III APPENDIX - A**

### **PETROLEUM STORAGE TANK COMPLIANCE PROGRAM LAW, REGULATIONS AND EDUCATIONAL LITERATURE**

#### **LAW**

Articles 5, 6, 9, 10, 11 of State Water Control Law

§§ 62.1-44.20 through 44.32

§§ 62.1-44.34:8 through 44.34:23

#### **REGULATIONS**

Underground Storage Tanks: Technical Standards and Corrective Action Requirements, 9 VAC 25-580-10 et seq.

Petroleum Underground Storage Tank Financial Responsibility Requirements, 9 VAC 25-590-10 et seq.

#### **EDUCATIONAL LITERATURE**

Fact Sheet: Regulated UST Closures

Fact Sheet: Registration of USTs

Notification for Underground Storage Tanks (Form 7530-1)

UST Facility Inspection Checklist

Musts for USTs

Don't Wait Until 1998

Straight Talk on Tanks: Leak Detection Methods

Doing Inventory Control Right

Manual Tank Gauging for Small Underground Storage Tanks

What Do You Have To Do? Minimum Requirements for Leak Detection, Corrosion Protection, Spill and Overfill Protection

Necessary Documentation and Requirements for Closure of Petroleum USTs

Financial Responsibility Requirements for Petroleum Underground Storage Tank Owners and Operators

Financial Responsibility Demonstration Requirements for Local Governments

## **VOLUME III**

### **APPENDIX - B**

#### **SAFETY TOPICS TO BE INCLUDED IN REGIONAL TRAINING**

- I. Safety Considerations
  - A. Vehicle Accidents
    - a. Notify State Police for all accidents involving state vehicles (see appendix)
    - b. Vehicle safety equipment (flares, first aid kit, spare tire, etc)
  - B. Pedestrian accidents with moving vehicles
    - a. Safety vest and traffic cones provide increased visibility
    - b. Avoid being in the line of traffic
  - C. Slip, Trip and Fall
    - a. Slippery surfaces at fueling facilities
  - D. Injuries from improper lifting
    - a. Inspector should avoid lifting heavy equipment or covers
    - b. Prying tools provided for small covers
    - c. Gloves provided for hand protection
  - E. Sun and heat exposure
    - a. Using sun screen provided in first aid kit
    - b. Drinking adequate amounts of water
  - F. Petroleum vapors and liquids
    - a. Breathing vapors should be avoided
    - b. Gloves and proper clothing to cover exposed skin
  - G. Confined Spaces
    - a. Submersible pump manways, open trenches and tank pits are confined spaces
    - b. Do not enter confined spaces
  - H. Insect bites and stings
    - a. Certain insects may be attracted to aromatic chemicals such as gasoline and perfume.
    - b. Some spiders are attracted to the damp cool sumps at stations
    - c. Use first Aid kit for bite and stings.
  - I. Hostile Facility Personnel
  - J. Occupational Safety
  - K. Personnel Protection

## **VOLUME III**

### **APPENDIX - C**

#### **EQUIPMENT AND MATERIALS FOR ALL UST INSPECTIONS**

- A. Mandatory Equipment and Materials
1. DEQ Identification Card; and,
  2. State car to be equipped as follows:
    - a. A Geographic Positioning System (GPS) receiver,
    - b. Two crowbars,
    - c. Two screw drivers,
    - d. Three large safety cones,
    - e. One package of disposable hand wipes,
    - f. One local map book, and
    - g. One Virginia atlas.
- B. Recommended Equipment and Materials for All UST Inspections
1. DEQ T-shirt(s);
  2. DEQ cap;
  3. At least one pair of work gloves;
  4. At least one box of disposable gloves;
  5. Two to three pairs of ear plugs;
  6. One pair of safety glasses;
  7. One safety vest;
  8. One clip board;
  9. Office supplies to include pens, pencils, markers, ruler and paper; and,
  10. Sonitrol card (where applicable).



## VOLUME III APPENDIX - D

### FORMAL INSPECTION NOTIFICATION LETTER

(Regional Office Letterhead)

Month 00, Year

*[UST Owner/Operator  
Company Name  
Street Address  
City, State Zip]*

*RE: Notification of Underground Storage Tank ("UST") Inspection and Records  
Review for [Name of Facility] at [Facility Address]; Facility Identification  
Number [0-000000]*

*Dear [Mr./Ms.Last Name of Owner/Operator or Authorized Representative]:*

The Department of Environmental Quality ("DEQ") [Select: Northern Virginia, Piedmont, South Central, Southwest, Tidewater, Valley, West Central] Regional Office will conduct an UST compliance inspection at [Select one: (1) [Time] on [Month 00, Year] or (2) a convenient time to be arranged later by telephone] at the referenced UST facility pursuant to the authority granted in Virginia Code §§ 62.1-44.20 and 62.1-44.34:9 and Virginia Regulation 9 VAC 25-580-120 and -360.

At that time, please ensure that you or your authorized representative is present at the facility. You will be asked to verify that you have complied with the UST regulatory requirements. If applicable at the time of inspection, verification may be accomplished by the following:

1. providing copies of required records;
2. demonstrating the existence and functionality of the equipment;
3. answering questions regarding the equipment and operations at the facility; and
4. removing covers, etc. and/or making equipment accessible for visual inspection and/or operation.

It also will be necessary for you to have the original and one set of copies of the following records available, if applicable, for the UST system(s) at the facility:

1. **Release Detection Records**

- a. Most recent two months of inventory control records;
- b. Most recent tank and/or piping tightness test;
- c. Most recent two months of weekly manual tank gauging records;
- d. Most recent two months of automatic tank gauging reports;
- e. Most recent two months of vapor monitoring results;
- f. Most recent two months of groundwater monitoring results;
- g. Initial site assessment for installation of either vapor or groundwater monitoring wells;
- h. Most recent two months of interstitial monitoring results;
- I. Most recent two months of statistical inventory reconciliation (SIR) monitoring results;
- j. Most recent two months of records for other types of release detection methods used;
- k. Record(s) demonstrating that automatic line leak detector(s) (ALLDs) met regulatory performance requirements upon installation;
- l. Most recent annual test results for ALLDs; and/or
- m. Written manufacturer performance claims.

2. **Corrosion Protection Records**

- a. Tank Installation Records
- b. For New Tank/Pipe Installations:
  - (1) Six month inspection;
  - (2) Three year inspection; and/or
  - (3) Most recent two sixty-day inspections for impressed current systems.
- c. For Upgraded Tank/Pipe Installations:

- (1) Six month inspection;
- (2) Three year inspection;
- (3) Most recent two sixty-day inspections for impressed current systems;
- (4) For tanks more than ten years old at the time of upgrade, the assessment performed in conjunction with the upgrade; and/or
- (5) For tanks less than ten years old at the time of upgrade, the release detection records demonstrating tank soundness.

3. **Financial Responsibility Demonstration Records**

- a. Current demonstration mechanism, meaning either:
  - (1) Letter from Chief Financial Officer;
  - (2) Guarantee (along with Letter from Chief Financial Officer from guarantor);
  - (3) Letter of Credit;
  - (4) Surety Bond;
  - (5) Insurance Certificate or Endorsement; or
  - (6) Trust Agreement.
- b. Certification of Financial Responsibility;
- c. Certification of Annual Gallonage; and
- d. For guarantee, letter of credit and surety bond demonstrations, the standby trust agreement and certification of acknowledgment.

Please feel free to call me at (000) 000-0000 if you have questions regarding the inspection.

Sincerely,

[Name of Inspector]  
Inspector





**VOLUME III**  
**APPENDIX - E**

**UST Inspection Checklist**





## Underground Storage Tank Facility Inspection Checklist

Inspection Type: ☐ Informal ☐ Formal

Facility ID # \_\_\_\_\_ - \_\_\_\_\_ Inspector: \_\_\_\_\_ Inspection Date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_

### I. GENERAL FACILITY INFORMATION

**Number of regulated USTs at facility:** Total # \_\_\_\_\_  
 # in use \_\_\_\_\_ # closed in the ground \_\_\_\_\_ # temporarily closed \_\_\_\_\_ # out of service but improperly deactivated \_\_\_\_\_

#### Facility Name

As Currently Posted: \_\_\_\_\_  
 As Currently Registered: \_\_\_\_\_  
 As Formerly Registered (if applicable): \_\_\_\_\_

#### Facility Address

Street address: \_\_\_\_\_  
 City: \_\_\_\_\_ City/County: \_\_\_\_\_  
 Phone: (\_\_\_\_) \_\_\_\_\_  
 Latitude: 3 \_\_\_\_ °N Longitude: 0 \_\_\_\_ °W (use degrees and decimals)  
 Currently registered address \_\_\_\_\_  
 Formerly registered address (if applicable) \_\_\_\_\_

#### Owner Information (according to onsite contact)

Current Tank Owner Name: \_\_\_\_\_  
 Owner Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ Phone: (\_\_\_\_) \_\_\_\_\_

#### Facility Contact Onsite during inspection

Potable Water Source: Public Water\_\_\_\_;  
 Deep Well\_\_\_\_; Shallow Well\_\_\_\_  
 PC#\_\_\_\_\_  
 Fuel Supplier\_\_\_\_\_  
 Suspected Release\_\_\_\_\_  
 Length of Piping\_\_\_\_\_feet

### II. INSPECTION SUMMARY

#### Apparent Noncompliance issues:

Facility in compliance: Yes ☐ No ☐

Facility being reported to EPA as non-compliant ☐

- ☐ Registration (Circle all that apply.)
  - a. Not Registered    b. Registration Amendment Required    c. Closure Documentation Required
- ☐ Spill Prevention
- ☐ Overfill Prevention
- ☐ Corrosion Protection (Circle all that apply.)
  - a. Tanks    b. Piping    c. Operation and Maintenance (if applicable)
- ☐ Release Detection (Circle all that apply.)
  - a. Not Performed for Tanks    b. Not Performed for Pipes    c. Operation/Maintenance Issues
- ☐ Financial Responsibility

**Owner's expressed intent:** ☐ upgrade ☐ replace ☐ close ☐ not available ☐ other (explain in comments)

**Inspector Comments/Schedule for completing work:** \_\_\_\_\_

**Inspector's Signature:** \_\_\_\_\_

Facility ID# \_\_\_\_\_

Inspection Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

### III. UST SYSTEM DESCRIPTION -- ACTIVE USTs

#### GENERAL INFORMATION:

	Tank#	Tank#	Tank#	Tank#	Tank#	Tank#
Date Installed:	____/____/____	____/____/____	____/____/____	____/____/____	____/____/____	____/____/____
Date of Upgrade (if applicable):	____/____/____	____/____/____	____/____/____	____/____/____	____/____/____	____/____/____
Tank Capacity (gallons):	_____	_____	_____	_____	_____	_____
Substance Stored:	_____	_____	_____	_____	_____	_____
Fill ports marked? (circle one)	Yes/No	Yes/ No	Yes/No	Yes/No	Yes/No	Yes/No

#### SPILL PREVENTION

Comments: \_\_\_\_\_

Spill Containment Device	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not Required (xfers <25gals.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### OVERFILL PREVENTION

Comments: \_\_\_\_\_

Shutoff Valve	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ball Float	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Owner confirms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Form 7530 indicates present	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alarm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not Required (xfers <25gals.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### CORROSION PROTECTION (TANK and PIPE)

Comments: \_\_\_\_\_

	Tank Pipe	Tank Pipe	Tank Pipe	Tank Pipe	Tank Pipe	Tank Pipe
Cathodically Protected Metal (Impressed or Galvanic)	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
Fiberglass-- CP Not Required	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
Composite (Steel/Fiberglass)-- CP Not Required	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Secondary Containment / Double Walled-- CP Not Required (if nonmetallic)	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
Lined Interior-- CP Not Required	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other Approved Method	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
Method name/type:	_____	_____	_____	_____	_____	_____

Facility ID# \_\_\_\_\_

Inspection Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

### RELEASE DETECTION (TANK)

Comments: \_\_\_\_\_

Inventory Control & TTT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manual Tank Gauging	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Automatic Tank Gauging (ATG)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vapor Monitoring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Groundwater Monitoring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Interstitial Monitoring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SIR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other Approved Method	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not Applicable (e.g. emergency generator UST)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### RELEASE DETECTION (PIPING)

Comments: \_\_\_\_\_

#### Pressurized and Gravity Fed Piping:

Automatic Line Leak Detector (ALLD) + Annual Line Test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ALLD + ATG/LLD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ALLD + Vapor Monitoring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ALLD + Groundwater Monitoring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ALLD + Interstitial Monitoring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ALLD + Other Approved Methods(SIR)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### Suction Piping, Regulated:

Line tightness testing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vapor Monitoring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Groundwater Monitoring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Interstitial Monitoring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other Approved Method (SIR)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### Suction Piping - Unregulated

Release Detection not required if check valve at dispenser & pipe slopes to tank	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Form 7530 indicates present	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Gravity Fed Piping - Unregulated</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Facility ID# \_\_\_\_\_

Inspection Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

#### IV. TANK RELEASE DETECTION -- DETAILED REVIEW

##### INVENTORY CONTROL + TANK TIGHTNESS TESTING (TTT)

	Tank# 1	Tank# 2	Tank# 3	Tank# 4	Tank# 5	Tank# 6
Applicable Tanks:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Eligibility expiration date:	____/____/____	____/____/____	____/____/____	____/____/____	____/____/____	____/____/____
<b>Records:</b> Complete <input type="checkbox"/> Incomplete <input type="checkbox"/> No Records <input type="checkbox"/> month/year reviewed: ____/____; ____/____; ____/____; ____/____						
Daily stick readings to 1/8"	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Monthly reconciliation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Monthly water monitoring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Date of last TTT	____/____/____	____/____/____	____/____/____	____/____/____	____/____/____	____/____/____
Tank passed TTT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fill line/access port with drop tube	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dipstick:						
Marked legibly to 1/8"	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>					
In serviceable condition	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>					
<b>Comments:</b> _____						
_____						

##### MANUAL TANK GAUGING

	Tank# 1	Tank# 2	Tank# 3	Tank# 4	Tank# 5	Tank# 6
Applicable Tanks:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Eligibility expiration date:	____/____/____	____/____/____	____/____/____	____/____/____	____/____/____	____/____/____
Tank is 2,000 gallons or less	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Records:</b> Complete <input type="checkbox"/> Incomplete <input type="checkbox"/> No Records <input type="checkbox"/> month/year reviewed: ____/____; ____/____; ____/____; ____/____						
Stick readings to 1/8"	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Two liquid measurements taken	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Method is performed weekly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Results variation within standard	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Date last monitoring	____/____/____	____/____/____	____/____/____	____/____/____	____/____/____	____/____/____
Tank Tightness Test (TTT)						
Date of last TTT	____/____/____	____/____/____	____/____/____	____/____/____	____/____/____	____/____/____
Tank passed TTT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TTT NOT Required	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dipstick:						
Marked legibly to 1/8"	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>					
In serviceable condition	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>					
<b>Comments:</b> _____						
_____						
_____						
_____						
_____						

Facility ID# \_\_\_\_\_

Inspection Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

**IV. TANK RELEASE DETECTION -- DETAILED REVIEW (continued)**

**AUTOMATIC TANK GAUGING (ATG)**

	Tank# 1	Tank# 2	Tank# 3	Tank# 4	Tank# 5	Tank# 6
Applicable Tanks:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Records:</b> Complete <input type="checkbox"/> Incomplete <input type="checkbox"/> No Records <input type="checkbox"/> month/year reviewed: ____/____; ____/____; ____/____; ____/____						
Conducts monthly monitoring @ .2gph	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Date last monitoring event.	____/____/____	____/____/____	____/____/____	____/____/____	____/____/____	____/____/____
System appears functional Yes <input type="checkbox"/> No <input type="checkbox"/>						
ATG type/vendor	_____					

**Comments:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**VAPOR MONITORING**

	Tank# 1	Tank# 2	Tank# 3	Tank# 4	Tank# 5	Tank# 6
Applicable Tanks:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Number of vapor monitoring wells at facility. Number : _____						
<b>Records:</b> Complete <input type="checkbox"/> Incomplete <input type="checkbox"/> No Records <input type="checkbox"/> month/year reviewed: ____/____; ____/____; ____/____; ____/____						
Data recorded monthly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Date last monitoring event.	____/____/____	____/____/____	____/____/____	____/____/____	____/____/____	____/____/____
Wells adjacent to excavation Yes <input type="checkbox"/> No <input type="checkbox"/>						
Monitoring device operative Yes <input type="checkbox"/> No <input type="checkbox"/>						
Wells appear to be properly installed according to regulations Yes <input type="checkbox"/> No <input type="checkbox"/>						

**Comments:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Facility ID# \_\_\_\_\_

Inspection Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

#### IV. TANK RELEASE DETECTION -- DETAILED REVIEW (continued)

##### GROUNDWATER MONITORING

	Tank# 1	Tank# 2	Tank# 3	Tank# 4	Tank# 5	Tank# 6
Applicable Tanks:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Number of release detection groundwater monitoring wells at facility. Number: _____						
<b>Records:</b> Complete <input type="checkbox"/> Incomplete <input type="checkbox"/> No Records <input type="checkbox"/> month/year reviewed: ____/____; ____/____; ____/____; ____/____						
Data recorded monthly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Date last monitoring event. ____/____/____	____/____/____	____/____/____	____/____/____	____/____/____	____/____/____	____/____/____
Wells intercept or are adjacent to excavation zone	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Specific gravity < 1; immiscible	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Device detects 1/8" of free product	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
If auto monitor, device operational	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Wells appear to be properly installed according to regulations	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
<b>Comments:</b> _____						
_____						
_____						
_____						
_____						
_____						

##### INTERSTITIAL MONITORING

	Tank# 1	Tank# 2	Tank# 3	Tank# 4	Tank# 5	Tank# 6
Applicable Tanks:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Records:</b> Complete <input type="checkbox"/> Incomplete <input type="checkbox"/> No Records <input type="checkbox"/> month/year reviewed: ____/____; ____/____; ____/____; ____/____						
Type of detection equipment used: _____						
Date last monitoring event. ____/____/____	____/____/____	____/____/____	____/____/____	____/____/____	____/____/____	____/____/____
Checked monthly; recorded	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
System appears functional	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
<b>Comments:</b> _____						
_____						
_____						
_____						
_____						
_____						
_____						
_____						
_____						
_____						



Facility ID# \_\_\_\_\_

Inspection Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

**IV. TANK RELEASE DETECTION -- DETAILED REVIEW (continued)**

	Tank# 1	Tank# 2	Tank# 3	Tank# 4	Tank# 5	Tank# 6
Applicable Tanks:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vendor name:	_____					
Method conducted at 0.2 gph leak rate or less	Yes <input type="checkbox"/>	No <input type="checkbox"/>				
Records:	Complete <input type="checkbox"/>	Incomplete <input type="checkbox"/>	No Records <input type="checkbox"/>	month/year reviewed: ____/____; ____/____; ____/____; ____/____		
Date of last SIR report.	____/____/____	____/____/____	____/____/____	____/____/____	____/____/____	____/____/____
Daily stick readings to 1/8"	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dipstick:						
Marked legibly to 1/8"	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>			
In serviceable condition	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>			
Results of "inconclusive" were investigated and corrected	Yes <input type="checkbox"/>	No <input type="checkbox"/>				
System appears functional	Yes <input type="checkbox"/>	No <input type="checkbox"/>				
Comments:	_____ _____ _____ _____ _____ _____ _____ _____					

	Tank# 1	Tank# 2	Tank# 3	Tank# 4	Tank# 5	Tank# 6
Applicable Tanks:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Specify type/vendor:	_____					
Records:	Complete <input type="checkbox"/>	Incomplete <input type="checkbox"/>	No Records <input type="checkbox"/>	month/year reviewed: ____/____; ____/____; ____/____; ____/____		
.2GPH (PD= 0.95; PFA 0.05)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Uses Board approved method	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:	_____ _____ _____ _____ _____ _____ _____ _____					

Facility ID# \_\_\_\_\_

Inspection Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

**V. PIPING RELEASE DETECTION -- DETAILED REVIEW****Release Detection For Pressurized & Gravity Fed Piping:**

	Tank# 1	Tank# 2	Tank# 3	Tank# 4	Tank# 5	Tank# 6
<b>Automatic Line Leak Detector (ALLD) Type:</b>						
Automatic flow restrictor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Automatic shut-off device	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Continuous alarm system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Automatic Line Leak runs through ATG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manufacturer / Model:	_____	_____	_____	_____	_____	_____
Not field verified	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Form 7530 indicates present	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ALLD <b>Records:</b> Yes <input type="checkbox"/> No <input type="checkbox"/> Incomplete <input type="checkbox"/>						
ALLD tested past year	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Date of last test event:	____/____/____	____/____/____	____/____/____	____/____/____	____/____/____	____/____/____
Not required <input type="checkbox"/>						
ALLD Passed Test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**AND Either Annual Line Tightness Test (ALTT) OR Monthly Monitoring:****Annual Line Tightness Testing**ALTT **Records:** Yes ☐ No ☐ Incomplete ☐

Lines tested in last 12 months	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lines passed test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Date last testing.	____/____/____	____/____/____	____/____/____	____/____/____	____/____/____	____/____/____

**Monthly Monitoring (One method must be selected from the following list)**

Automatic tank gauging (ATG)

ATG Monthly monitor (0.2 gph) ☐ATG Annual pipe test (0.1gph) ☐ATG **Records:** Yes ☐ No ☐ Incomplete ☐ month/year reviewed: \_\_\_\_/\_\_\_\_; \_\_\_\_/\_\_\_\_; \_\_\_\_/\_\_\_\_; \_\_\_\_/\_\_\_\_Lines passed ATG Test ☐Monitoring data on file ☐

Date last monitoring. \_\_\_\_/\_\_\_\_/\_\_\_\_

**Vapor monitoring** ☐**Groundwater monitoring** ☐**Interstitial monitoring** ☐**Other approved method (e.g. SIR)** ☐**Release Detection For Regulated Suction Piping: (One method must be selected from the following list)****Line Tightness Testing (every 3 yrs.)** ☐LTT **Records:** Yes ☐ No ☐ Incomplete ☐

Facility ID# \_\_\_\_\_

Inspection Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

Lines passed test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Date last testing	____/____/____	____/____/____	____/____/____	____/____/____	____/____/____	____/____/____
<b>Vapor monitoring</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Groundwater monitoring</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Interstitial monitoring</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Other method approved (e.g. SIR)</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Comments:</b> _____						
_____						
_____						

## VI. CORROSION PROTECTION SYSTEM -- DETAILED REVIEW

	Tank# 1	Tank# 2	Tank# 3	Tank# 4	Tank# 5	Tank# 6
<b>Type of Tank Corrosion Protection:</b>						
New / Existing Tank (Sti-P3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Upgraded "Existing" Tank: Date:	____/____/____	____/____/____	____/____/____	____/____/____	____/____/____	____/____/____
Impressed Current	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sacrificial Anode(s)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Internal Lining	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Records:</b> Yes <input type="checkbox"/> No <input type="checkbox"/> Incomplete <input type="checkbox"/>						
System passed CP test ( -0.85V)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Date of most recent test	____/____/____	____/____/____	____/____/____	____/____/____	____/____/____	____/____/____
Inspection every 60 days (if impressed current)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Records of post-system failure test on file	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>For "existing" tanks upgraded with cathodic protection:</b>						
Acceptable tank assessment done prior: Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
Tank <10 years old at time of upgrade:						
Monthly monitoring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TTT prior + 6 mos. after upgrade	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dates of TTTs: Date:	____/____/____	____/____/____	____/____/____	____/____/____	____/____/____	____/____/____
Date:	____/____/____	____/____/____	____/____/____	____/____/____	____/____/____	____/____/____
Methods which are not dependent on tank age:						
Internally Inspected	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ASTM ES40-94 (11/94-3/22/98)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Facility ID# \_\_\_\_\_

Inspection Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

ASTM Standard G158 (9/10/98 - present)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEP(Tank Environmental Profile) (3/22/98 - present)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Petroscope (Tanknology) (3/22/98 - present)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MTCF (3/22/98 - present) (Mean Time to Corrosion Failure)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
UST Environmental (3/22/98 - present)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other Approved Method: (Specify in comments)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Type of Piping Cathodic Protection:**

New Metallic Piping w/anodes or Impressed Current	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

Upgraded Piping: Upgrade Date: \_\_\_\_/\_\_\_\_/\_\_\_\_ \_\_\_\_/\_\_\_\_/\_\_\_\_ \_\_\_\_/\_\_\_\_/\_\_\_\_ \_\_\_\_/\_\_\_\_/\_\_\_\_ \_\_\_\_/\_\_\_\_/\_\_\_\_ \_\_\_\_/\_\_\_\_/\_\_\_\_

Impressed Current	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

Sacrificial Anodes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

**Records:** Complete ☐ Incomplete ☐ No Records ☐ month/year reviewed: \_\_\_\_/\_\_\_\_; \_\_\_\_/\_\_\_\_; \_\_\_\_/\_\_\_\_; \_\_\_\_/\_\_\_\_

System passed CP test (-0.85V)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

Date of most recent test \_\_\_\_/\_\_\_\_/\_\_\_\_ \_\_\_\_/\_\_\_\_/\_\_\_\_ \_\_\_\_/\_\_\_\_/\_\_\_\_ \_\_\_\_/\_\_\_\_/\_\_\_\_ \_\_\_\_/\_\_\_\_/\_\_\_\_ \_\_\_\_/\_\_\_\_/\_\_\_\_

Inspection every 60 days (if impressed current)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

Records of post-system failure test on file	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

**Comments:** \_\_\_\_\_

\_\_\_\_\_

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\_\_\_\_\_

\_\_\_\_\_

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\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Inspection Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

**GENERAL INFORMATION:**

[illegible]

## UST Inspection Checklist (Revised 9/01)



**VOLUME III**  
**APPENDIX – F**

**“Operational Compliance” Table**





	General Requirements	IC + TTT	MTG	ATG	Vapor Monitoring	Groundwater Monitoring	Interstitial Monitoring	SIR & Other Methods	ALLD	LTT
<b>Tank Release Detection</b>	<ul style="list-style-type: none"> <li>Facility must be conducting an acceptable method of release detection and the method must meet the performance standard and accuracy for the method.</li> <li>For IC+TTT: USTs must be less than 10 years old or have been upgraded with CP/lined less than 10 yrs. ago.</li> <li>For MTG: USTs must be less than 10 years old or have been upgraded with CP/lined less than 10 yrs. ago unless the tank is 1,000 gallons or less and the diameter of the tank is 64" or 48" (tanks under 550 gallons may use MTG forever).</li> </ul>	<ul style="list-style-type: none"> <li>2 reconciliations from the past year.</li> <li>Records must reflect regular sticking of the tank.</li> <li>Tank tightness test performed within the past 5 years.</li> </ul>	<ul style="list-style-type: none"> <li>2 reconciliations from the past year.</li> <li>Records must reflect regular sticking of the tank.</li> <li>Tank tightness test performed within the past 5 years (if applicable).</li> </ul>	<ul style="list-style-type: none"> <li>Most recent result within 30 days (unless failure due to operational considerations: low product, delivery during test, etc—longer time period can be considered.)</li> <li>Gauge must be capable of conducting a 0.2gph leak test @ (95/5) accuracy.</li> </ul>	<ul style="list-style-type: none"> <li>There must be a record present to reflect the conducting of the method. Review 2 months of data from past year.</li> <li>The number and placement of wells is not obviously inappropriate.</li> </ul>	<ul style="list-style-type: none"> <li>There must be a record present to reflect the conducting of the method. Review 2 months of data from past year.</li> <li>The number and placement of wells is not obviously inappropriate.</li> </ul>	<ul style="list-style-type: none"> <li>The monitoring method must be functional. Records from monitor / test / visual check at inspection time indicates method is working.</li> <li>If there is no automatic alarm, review 2 months of records.</li> </ul>	<ul style="list-style-type: none"> <li>2 months of analyses from the past year.</li> <li>Program / analysis must reflect ability to detect a 0.2 gph leak @ (95/5) accuracy.</li> </ul>	N/A	N/A
<b>Piping Release Detection</b>	<ul style="list-style-type: none"> <li>Facility must be conducting an acceptable method of release detection.</li> </ul> <p>*Pressure pipe requires: ALLD + TTT (every year) or RD</p> <p>*Nonconforming Suction pipe requires: TTT (every 3 yrs)</p> <p>*Conforming Suction pipe: no RD</p>	N/A	N/A	<ul style="list-style-type: none"> <li>Most recent result within 30 days.</li> <li>Gauge must be capable of conducting a 0.2gph (monthly) or 0.1 gph (annual) leak test @ (95/5) accuracy.</li> </ul>	<ul style="list-style-type: none"> <li>There must be a record present to reflect the conducting of the method. Review 2 months of data from past year.</li> <li>The number and placement of wells is not obviously inappropriate.</li> </ul>	<ul style="list-style-type: none"> <li>There must be a record present to reflect the conducting of the method. Review 2 months of data from past year.</li> <li>The number and placement of wells is not obviously inappropriate.</li> </ul>	<ul style="list-style-type: none"> <li>The monitor must be functional. Records from monitor / test / visual check at inspection time indicates method is working.</li> <li>There must be a sensor in the sump or other necessary equipment.</li> <li>If there is no automatic alarm, review 2 months of records.</li> </ul>	<ul style="list-style-type: none"> <li>2 months of analyses from the past year.</li> <li>Program / analysis must reflect ability to detect a 0.2 gph leak @ (95/5) accuracy.</li> </ul>	<ul style="list-style-type: none"> <li>Mechanical ALLD: "present"</li> <li>Electronic ALLD: "present" + "on".</li> </ul>	<ul style="list-style-type: none"> <li>The lines must have been tightness tested within the past year (pressure pipe) or 3 years (suction pipe) depending on piping type.</li> </ul>

	Spill Prevention	Overfill Prevention	Cathodic Protection
1998 Requirements	<ul style="list-style-type: none"> <li>Spill Prevention must be present for all regulated UST system(s)--- except those with transfers less than 25 gallons.</li> <li>No indication device is not operational--appears functional.</li> </ul>	<ul style="list-style-type: none"> <li>Overfill Prevention must be present for all regulated UST system(s)--- except those with transfers less than 25 gallons.</li> <li>No indication device is not operational— appears functional.</li> <li>If overfill prevention cannot be visually verified, the VA 7530-1 Notification form, installation records, or owner states it is present.</li> </ul>	<ul style="list-style-type: none"> <li>The cathodic protection must have been tested previously to show that the system has worked since installation.</li> <li>Current owner shows system tested (or for lined tanks, show tank passed an inspection at 10 and following 5 years)—exceptions for new owners.</li> <li>Impressed Current – The rectifier must be turned on at time of inspection.</li> </ul>

Financial Responsibility
<ul style="list-style-type: none"> <li>Owner indicates ability to demonstrate required financial responsibility.</li> </ul>

**VOLUME III**  
**APPENDIX - G**  
**List of Acronyms**

AHFS – Airport Hydrant Fueling Systems  
ALLD – Automatic Line Leak Detection  
ALTT – Annual Line Tightness Testing  
API – American Petroleum Institute  
ASTM – American Society of Testing and Materials  
ATG – Automatic Tank Gauge  
BOCA – Building Officials and Code Administrators  
CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act  
CFR – Code of Federal Regulations  
CP – Cathodic Protection  
DEQ or VDEQ – Virginia Department of Environmental Quality  
DMV – Division of Motor Vehicles  
FID – Flame Ionization Detector  
FA – Financial Assurance  
FR – Financial Responsibility  
GM – Groundwater Monitoring  
IC – Inventory Control  
IC + TTT – Inventory Control and Tank Tightness Testing  
IM – Interstitial Monitoring  
IR – Voltage = I(current) x R(resistance)  
LOA – Letter of Agreement  
LTT – Line Tightness Testing  
LUST – Leaking Underground Storage Tank  
MTG – Manual Tank Gauging  
MV - millivolt  
NACE – National Association of Corrosion Engineers  
OFA – Office of Financial Assurance  
OSHA – Occupational Health and Safety Administration  
OSRR – Office of Spill Response and Remediation (DEQ)  
PC# - Pollution Complaint Number (a DEQ tracking number)  
PID – Photo Ionization Detector  
RCRA – Resource Conservation and Recovery Act (federal hazardous & solid waste law)  
RO – Regional Office  
SIR – Statistical Inventory Reconciliation  
Sti-P3 – Steel Tank Institute (P3 = 3 protections) Tank  
STORMS – Storage Tank Management Subsystem (UST database)  
SWCL – State Water Control Law  
TTT – Tank Tightness Testing  
UST – Underground Storage Tank  
UL – Underwriters Laboratories  
USC – United States Code  
VAC – Virginia Administrative Code  
VPDES – Virginia Pollution Discharge Elimination System  
VM – Vapor Monitoring  
VPSTF – Virginia Petroleum Storage Tank Fund



# STORAGE TANK PROGRAM COMPLIANCE MANUAL

## VOLUME IV ABOVEGROUND STORAGE TANK POLLUTION PREVENTION

(October 12, 2001)



**UNDER DEVELOPMENT**





# STORAGE TANK PROGRAM COMPLIANCE MANUAL

## VOLUME V OIL DISCHARGE CONTINGENCY PLAN

(October 12, 2001)



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# 1. Introduction

This Volume V contains detailed guidance regarding the requirements for Oil Discharge Contingency Plans. In most cases, the inspector will verify the information in an ODCP during an ODCP inspection. The sections in Volume IV pertaining to types of inspections, pre-inspection procedures, instructions applicable to all inspections, and post-inspection procedures apply to the inspector's ODCP site verification activities. ODCP reviews are conducted as a part of an informal or a formal inspection.

## 2. ODCP

### 2.1 Definitions

Virginia Regulation 9 VAC 25-91-10 contains definitions applicable to ODCP requirements. The following discussion sets out applicable definitions, along with interpretations made to date regarding the definitions.

**“Aboveground storage tank or AST”** means any one or combination of tanks, including pipes, used to contain an accumulation of oil at atmospheric pressure, and the volume of which, including the volume of the pipes, is more than 90% above the surface of the ground. This term does not include line pipe and breakout tanks of an interstate pipeline regulated under the federal Accountable Pipeline Safety and Partnership Act of 1996 [49 U.S.C § 60101 et seq.].

**“Board”** means the State Water Control Board.

**“Containment and cleanup”** means abatement, containment, removal and disposal of oil and, to the extent possible, the restoration of the environment to its existing state prior to an oil discharge.

**“Corrosion professional”** means a person who by reason of thorough knowledge of the physical sciences and the principles of engineering and mathematics acquired by a professional education and related practical experience is qualified to engage in the practice of corrosion control on buried or submerged metal piping systems and metal tanks. Such a person shall be accredited or certified as being qualified by the National Association of Corrosion Engineers or be a registered professional engineer who has certification or licensing that includes education and experience in corrosion control of buried or submerged metal piping systems and metal tanks.

**“Discharge”** means any spilling, leaking, pumping, pouring, emitting, emptying or dumping.

**“Department or DEQ”** means the Department of Environmental Quality.

**“Facility”** means any development or installation within the Commonwealth that deals in, stores or handles oil, and includes a pipeline.

**Type of Storage**: Where vehicles such as tank trucks and rail cars are used to store oil at a site, the site can be considered a facility. The definition of an ODCP facility is based on the functions of the facility; thus, if a function of a facility is to deal in, handle and store oil aboveground, then the definition applies. To clarify, this means that a specific definition of aboveground storage or tanks does not bear on whether the site is considered a facility.

**Multiple Operators or Multiple Facilities**: A single geographical area may contain more than one owner or operator, but the oil storage operation under the control or responsibility of each operator is considered a separate facility. A single facility exists if one owner or operator exercises control over all oil storage operations within the geographical boundary of that site. For military installations, a facility is the area under responsibility of a single command.

The facility owner or operator declares the scope of operational responsibility of the facility by completing and certifying the ODCP Application Form. The storage capacity listed in the application must reflect the information submitted for AST Registration.

**Effect of the Phrase “and includes a pipeline”**: The phrase “and includes a pipeline” does not offer a qualification of the definition of a storage facility for inclusion in the regulations. The phrase “and includes a pipeline” means the definition of facility includes interstate and intrastate lines transporting oil. The term “pipeline” does not include transfer lines that are used to move product within a facility.

For the purposes of this regulation the demarcation of a pipeline facility and a storage terminal is that point where the contractual obligations for operation and maintenance begin and end for each operator. Transfer lines that are under the responsibility and control of the facility operator and extend beyond the property boundaries of the facility are considered part of the facility.

**“Flow-through process tank”** means (as defined in 40 CFR Part 280) a tank that forms an integral part of a production process through which there is a steady, variable, recurring, or intermittent flow of materials during the operation of the process. Flow-through process tanks do not include tanks used for the storage of materials prior to their introduction into the production process or for the storage of finished products or by-products from the production process.

**“Local building official”** means the person authorized by the Commonwealth to enforce the provisions of the Uniform Statewide Building Code (USBC).

**“Local director or coordinator of emergency services”** means any person appointed pursuant to § 44-146.19 of the Code of Virginia.

**“Major repair”** means alterations that refer to operations that require cutting, additions, removal or replacement of the annular plate ring, the shell-to-bottom weld or a sizable portion of the AST shell.

**“Oil”** means oil of any kind and in any form, including, but not limited to, petroleum and petroleum by-products, fuel oil, lubricating oils, sludge, oil refuse, oil mixed with other wastes, crude oils, and all other liquid hydrocarbons regardless of specific gravity.

**Effect of the Phrase “all other liquid hydrocarbons regardless of specific gravity” on Product Applicability:** The referenced phrase has been included in the definition of oil since the inception of the Federal Water Pollution Control Act (1972), later amended to the Clean Water Act (1977). As it applies to State Water Control Law, the phrase “all other liquid hydrocarbons regardless of specific gravity” includes products that are “oil-like” rather than other hazardous materials or toxic compounds. Because animal and vegetable oils and compounds that are listed or designated in CERCLA are excluded from this regulation (see **CODE** § 62.1-44.34:17 and 9 VAC 25-91-30), for regulatory purposes, the phrase “all other liquid hydrocarbons regardless of specific gravity” means petroleum hydrocarbons.

**“Operator”** means any person who owns, operates, charters by demise, rents or otherwise exercises control over or responsibility for a facility or a vehicle or vessel.

**“Person”** means any firm, corporation, association or partnership, one or more individuals, or any governmental unit or agency thereof.

**“Pipeline”** means all new and existing pipe, rights-of-way, and any equipment, facility, or building used in the transportation of oil, including, but not limited to, line pipe, valves and other appurtenances connected to line pipe, pumping units, fabricated assemblies and associated with pumping units, metering and delivery stations and fabricated assemblies therein, and breakout tanks.

**“Pipes or piping”** means a pressure-tight cylinder used to convey a fluid or to transmit a fluid pressure and is ordinarily designated (pipe) in applicable material specifications. Materials designated tube or tubing in the specifications are treated as pipe when intended for pressure service. This term includes piping and associated piping which is utilized in the operation of an AST, or emanating from or feeding ASTs or transfers oil from or to an AST (e.g., dispensing systems, including airport hydrant fueling systems, supply systems, gauging systems, auxiliary systems, etc.). This term does not include line pipe and breakout tanks of an interstate pipeline regulated under the federal Accountable Pipeline Safety and Partnership Act of 1996 (49 U.S.C. § 60101 et seq.).

**“Release prevention barrier (RPB)”** means a non-earthen barrier that is impermeable; composed of material compatible with oil stored in the AST; meets proper engineering strength and elasticity standards, and functions to prevent the discharge of stored oil to state lands, waters and storm drains. It must contain and channel any leaked oil in a manner that provides for early release detection through the required daily and weekly inspections.

**“State Waters”** means all water, on the surface and under the ground, wholly or partially within or bordering the Commonwealth or within its jurisdiction.

**“Storage capacity”** means the total capacity of an AST or a container, whether filled in whole or in part with oil, a mixture of oil, or mixtures of oil with non-hazardous substances, or empty. An AST that has been permanently closed in accordance with this chapter has no storage capacity.

**“Tank”** means a device designed to contain an accumulation of oil and constructed of non-earthen materials, such as concrete, steel, or plastic, that provides structural support. This term does not include flow-through process tanks as defined in 40 CFR Part 280.

**“Tank Vessel”** means any vessel used in the transportation of oil in bulk as cargo. For the purpose of this regulation, this definition includes tankers, tank ships, tank barges and combination carriers when carrying oil. It does not include vessels carrying oil in drums, barrels, portable tanks or other packages or vessels carrying oil as fuel or stores for that vessel.

**“Upgrade”** means an alteration of the performance, design, equipment or appurtenances of an AST or facility to meet a higher, new, or current standard.

**“Vaulted tank”** means any tank situated upon or above the surface of the floor in an underground area (such as an underground room, basement, cellar, mine-working, drift, shaft, tunnel or vault) providing enough space for physical inspection of the exterior of the tank.

**“Vehicle”** means any motor vehicle, rolling stock or other artificial contrivance for transport whether self-propelled or otherwise, except vessels.

**“Vessel”** includes every description of watercraft or other contrivance used as a means of transporting on water, whether self-propelled or otherwise, and shall include barges and tugs.

## **2.2 Applicability**

Virginia Regulation 9 VAC 25-91-20 contains the applicability provisions for ODCP requirements. The following discussion sets out the relevant applicability provisions, along with interpretations made to date regarding those provisions.



### 2.2.1 ODCP Applicability Provisions

9 VAC 25-91-20 Applicability.

A. The operator shall comply with all applicable requirements pursuant to this chapter. The operator as defined in this chapter, can be more than one person and each operator shares joint responsibility for compliance.

B. The requirements of this chapter may vary in their applicability to any given AST or facility depending on the part in which the requirement appears. The applicability of parts II, III, IV, and V are differentiated as follows:

1. \*\*\*
2. \*\*\*
3. The provisions of part IV (9 VAC 25-91-170, Oil Discharge Contingency Plan (ODCP) requirements) of this chapter apply to: (i) an individual AST located within the Commonwealth of Virginia with an aboveground storage capacity of 25,000 gallons or greater of oil, unless otherwise specified within this chapter; and (ii) all facilities in the Commonwealth of Virginia with an aggregate aboveground storage capacity of 25,000 gallons or greater of oil, unless otherwise specified within this chapter.

### 2.2.2 Interpretations

**Determining Facility Capacity:** Because ASTs with a storage capacity of 660 or less are excluded from the regulation, the aggregate facility storage capacity does not include ASTs with 660 gallons or less storage capacity.

At facilities in which both ASTs and USTs are present, the aggregate facility storage capacity does not include UST storage capacity. Where product lines connect ASTs and USTs, the storage and/or handling capacity of individual aboveground storage tanks is added to the capacity of the lines up to the first valve prior to product flow to an underground storage tank system.

The capacities of transformers, hydraulic presses, heat exchangers or other equipment where oil is contained for operational purposes are not included in the facility capacity. The oil capacity of machinery and equipment where oil is contained only for operational purposes is not considered storage, because such machinery and equipment is excluded pursuant to 9 VAC 25-91-30(14). However, oil reservoirs (e.g., day tanks) which are not part of the equipment and separate tanks used to contain oil for operational purposes are included in the capacity.

Large volumes of oil may be contained in electrical transformers that are grouped at substations or located individually throughout the state. Because transformers are excluded under 9 VAC 25-91-30(16), their storage capacity is not included in facility storage capacity.

These exclusions are the same for the requirements of AST Registration (9 VAC 25-91-100) and AST Pollution Prevention (9 VAC 25-91-130).

**Bunkered tanks and bladders:** Some military facilities store oil in bunkered tanks and bladders. These bunkered tanks or bladders are partially covered with soil, but are above the contour of the surrounding land. If more than 90% of the volume of any tank or storage container (including piping volume) is above the ground surface, then the bunkered tank or bladder is considered aboveground storage.

**Vaulted Tanks:** This term means any tank situated upon or above the surface of the floor in an underground area (such as an underground room, basement, cellar, mine-working, drift, shaft, tunnel or vault) providing enough space for physical inspection of the exterior of the tank.

Additionally, tanks in basements, cellars, or other underground areas that are not considered underground storage according to definitions in Underground Storage Tanks: Technical Standards and Corrective Action Requirements 9 VAC 25-580-10 et seq., are considered aboveground storage for this regulation. To be considered an AST, the tank must be on or above the surface of the underground area, have ready access (e.g. a manway), and provide enough space for physical inspection of the exterior of the tank. If there is no access and/or there is not enough space to inspect the tank, it is a UST system and not subject to ODCP requirements.

The capacity of vaulted tanks is counted in the facility capacity. **Rail Tank Cars:** The storage capacity of stationery rail tank cars used for oil storage rather than for transportation is included in the facility capacity for determining the applicability of ODCP requirements. Indicia of whether the rail tank care is used for storage rather than transportation include: (1) its location at the facility; (2) whether it is connected to a locomotive; (3) whether the wheels are chocked; and (4) whether the product in the rail tank car has been consigned.

**Trucks Used Only for Intrafacility Delivery:** Where a tank truck is: (1) used to deliver oil to vehicles or equipment located within the facility; (2) kept loaded with product; and (3) usually located in one place when not in use, the tank truck is used to store oil for the facility and its capacity is added to the facility's storage capacity.

Unless used solely for the storage oil, licensed motor vehicle storage capacity is not included in facility capacity.

## 2.3 Exclusions

Virginia Regulation 9 VAC 25-91-30, which follows, contains exclusions to the AST regulation, including the ODCP provisions. The following discussion sets out the exclusions, along with interpretations made to date.

9 VAC 25-91-30. Exclusions.

A. The requirements of this chapter do not apply to:

1. Vessels;
2. Licensed motor vehicles, unless used solely for the storage of oil;
3. An AST with a storage capacity of 660 gallons or less of oil;
4. An AST containing petroleum, including crude oil or any fraction thereof, which is liquid at standard temperature and pressure (60° F at 14.7 pounds per square inch absolute) subject to and specifically listed or designated as a hazardous substance under subparagraphs (A) through (F) of §101(14) of the federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (42 USC § 9601 et seq.);
5. A wastewater treatment tank system that is part of a wastewater treatment facility regulated under § 402 or § 307(b) of the federal Clean Water Act (33 USC § 1251 et seq.);
6. An AST that is regulated by the Department of Mines, Minerals and Energy under Chapter 22.1 (§ 45.1-361.1 et seq.) of Title 45.1 of the Code of Virginia;
7. An AST used for the storage of products that are regulated pursuant to the federal Food, Drug, and Cosmetic Act (21 USC § 301 et seq.);
8. An AST that is used to store hazardous wastes listed or identified under Subtitle C of the Resource Conservation and Recovery Act (RCRA) (Solid Waste Disposal Act) (42 USC § 6901 et seq.), or a mixture of such hazardous wastes and other regulated substances;
9. An AST that is used to store propane gas, butane gas or other liquid petroleum gases;
10. An AST used to store nonpetroleum hydrocarbon-based animal and vegetable oils;
11. A liquid trap or associated gathering lines directly related to oil or gas production, or gathering operations;
12. A surface impoundment, pit, pond, or lagoon;
13. A stormwater or wastewater collection system;
14. Equipment or machinery that contains oil for operational purposes, including but not limited to lubricating systems, hydraulic systems, and heat transfer systems;
15. An AST used to contain oil for less than 120 days when: (i) used in connection with activities related to the containment and cleanup of oil; (ii) used by a federal, state or local entity in responding to an emergency; or (iii) used temporarily on-site to replace permanent capacity storage;
16. Oil-filled electrical equipment, including, but not limited to, transformers, circuit breakers or capacitors;

- 17. A flow-through process tank;
- 18. Oily water separators;
- 19. An AST containing dredge spoils;
- 20. An AST located on a farm or residence used for storing motor fuel for noncommercial purposes with an aggregate storage capacity of 1,100 gallons or less; or
- 21. Pipes or piping beyond the first valve from the AST that connects an AST with production process tanks or production process equipment.

B. \*\*\*

C. In addition to the exclusions listed in subsections A and B of this section, asphalt and asphalt compounds which are not liquid at standard conditions of temperature and pressure (60° F at 14.7 pounds per square inch absolute) are excluded for the purposes of any requirement to install groundwater monitoring wells or groundwater protection devices or to conduct groundwater characterization studies under Part IV (9 VAC 25-91-170, Oil Discharge Contingency Plan (ODCP) Requirements) and Part V (9 VAC 25-91-180 et seq., Groundwater characterization study (GCS) and GCS well monitoring requirements) of this chapter.

## 2.4 Compliance Dates

Virginia Regulation 9 VAC 25-91-40 contains the compliance dates for ODCP requirements. The following discussion sets out the relevant applicability provisions, along with interpretations made to date regarding those provisions.

### 2.4.1 Compliance Date Provisions

9 VAC 25-91-40. Compliance dates.

A. Every operator shall comply with this chapter on its effective date unless a later date is otherwise specified.

D. Operators of facilities subject to Part IV (9 VAC 25-91-170, Oil Discharge Contingency Plan (ODCP) Requirements) of this chapter that are brought into use after the effective date of this chapter shall submit a complete application meeting all applicable requirements of this chapter no later than 90 days prior to commencement of operations.

- 1. The operator must receive approval of the ODCP by DEQ prior to commencement of facility operations.
- 2. The operators of facilities that have previously met the provisions of ? 62.1-44.34:15 of the Code of Virginia for ODCP submittal shall not be required to resubmit the ODCP until 90 days prior to the date that plan's approval expires. Ninety days prior to the expiration of approval of the ODCP, the facility operator

shall submit an updated plan or certification of renewal of an existing plan according to 9 VAC 25-91-170 F.

E. As of July 1, 1997, an operator having obtained approval of the ODCP shall operate, maintain, monitor, and keep records pertaining to 9 VAC 25-91-170 A 18 of Part IV (9 VAC 25-91-170, Oil Discharge Contingency Plan (ODCP) Requirements) of this chapter and under the provisions of Part III (9 VAC 25-91-130 et seq., Pollution Prevention Requirements) of this chapter.

#### **2.4.2 Compliance Date Interpretations.**

##### **Statutory Effective Date and Program Implementation:**

As of July 1, 1992, **CODE** § 62.1-44.34:15(A) prohibited operators from operating a facility unless the board had approved the facility's ODCP. Because this provision was adopted in 1990, the board had adequate time to promulgate ODCP regulations to guide facility operators in the preparation of their ODCPs. The ODCP regulation (VR 60-14-07) was adopted December 9, 1991 and became effective January 29, 1992.

To accommodate the initial implementation of the ODCP approval process and allow operators to continue facility operations in compliance with **CODE** § 62.1-44.34:15.A, the board issued conditional letters of approval to applicants who had provided complete applications. Because the conditional approval of an ODCP consisted of only an administrative review, a more extensive formal approval process always followed conditional approval. The formal approval process, which is outlined in Appendix A, consisted of a detailed substantive review, which included field verification of containment and cleanup resources, a facility inspection, and a notification exercise.

Complete plans received on or before July 1, 1994 were conditionally approved and later reviewed for formal approval. Plans received after July 1, 1994: (1) may have been conditionally approved, followed later by the formal approval, or (2) may have undergone only the formal approval process. The approach each regional office used depended on the availability of resources necessary to conduct the more extensive formal reviews.

With program implementation now complete, conditional approvals are no longer applicable.

#### **2.4.3 Plan Effective Date:**

The effective date of an ODCP establishes the date from which the ODCP renewal deadline is calculated. The expiration date of the ODCP is noted to the operator in the formal approval letter. (See Appendix A - ODCP Approval.) All plans received by July 1, 1992 were assigned an effective date of July 1, 1992 under the conditional approval procedures discussed above. After July 1, 1992, the effective date of a plan was the date the plan was received. In conjunction with the implementation of regional compliance

tracking programs, as of March 1, 1994 the effective date of a plan is the date the Agency receives the correct fee and a complete application.

## **2.5 Statement of Purpose**

Virginia Regulation 9 VAC 25-91-50 contains the statement of purpose for the regulation.

9 VAC 25-91-50 Statement of purpose.

The purpose of this chapter is to: (i) establish requirements for registration of facilities and individual ASTs located within the Commonwealth; (ii) provide the board with the information necessary to identify and inventory facilities with an aggregate storage capacity of greater than 1,320 gallons of oil or individual ASTs with a storage capacity of greater than 660 gallons of oil; (iii) develop standards and procedures for operators of facilities with an aggregate aboveground storage capacity of 25,000 gallons or greater of oil relating to the prevention of pollution from new and existing aboveground storage tanks; (iv) provide requirements for the development of facility oil discharge contingency plans for facilities with an aggregate aboveground storage capacity of 25,000 gallons or greater of oil that will ensure that the applicant can take such steps as are necessary to protect environmentally sensitive areas, to respond to the threat of an oil discharge, and to contain, clean up and mitigate an oil discharge within the shortest feasible time, where plans must address concerns for the effect of oil discharges on the environment as well as considerations of public health and safety; and (v) provide requirements for facilities and individual ASTs with an aggregate aboveground storage capacity of one million gallons or greater of oil to conduct a groundwater characterization study (GCS) within the geographic boundaries of a facility; to submit the GCS as part of the oil discharge contingency plan; to conduct a monthly gauging and inspection of GCS monitoring wells, monitoring of well headspace and sampling and laboratory analysis of GCS monitoring wells; and to gather all observations and data maintained at the facility and compile and submit them as an annual report to the board.

## **2.6 Administrative Fees**

Virginia Regulation 9 VAC 25-91-60 sets out the fees for ODCP reviews. The following states the relevant provisions, along with any interpretations made to date.

### **2.6.1 Fee Provision**

#### **9 VAC 25-91-60 Administrative Fees**

A. Fees are assessed for review of oil discharge contingency plans and for registration of an AST or a facility according to the schedules contained in subsection B and C of this section.

A registration form or an application for review of a contingency plan will not be accepted unless the required fee has been received by the department.

1. Fees shall be paid in United States currency by check, draft, or postal money order made payable to the Treasurer of Virginia.
2. The fee, together with the form or plan, shall be sent to the department at the following mailing address:

Department of Environmental Quality  
Office of Financial Management  
P.O. Box 10150  
Richmond, VA 23240

3. Notifications and correspondence for which a fee is not applicable must be mailed to the department as specified in 9 VAC 25-91-70.

B. \*\*\*

C. ODCP application.

1. ODCP application fees are as follows:
  - a. For a facility with an aggregate aboveground maximum storage or handling capacity from 25,000 gallons up to and including 100,000 gallons of oil the fee is \$718;
  - b. For a facility with an aggregate aboveground maximum storage or handling capacity from 100,001 gallons up to one million gallons of oil the fee is \$2,155;
  - c. For a facility with an aggregate aboveground maximum storage or handling capacity of one million gallons or greater of oil the fee is \$3,353; or
  - d. For a pipeline, the ODCP application fee shall be based on the average daily throughput of oil. Once that volume is determined, the ODCP application fee will be calculated per subdivisions a, b and c of this subdivision.
2. The fee for approval of a contingency plan encompassing more than one facility as described in 9 VAC 25-91-170 D shall be based on the aggregate aboveground storage capacity of the facilities.
3. Fees shall only be paid upon initial submittal of an oil discharge contingency plan by an operator. Renewals, additions, deletions or changes to the plan are not subject to the administrative fee.
4. Application fees are refundable upon receipt of a written request to withdraw the ODCP application provided the request is received no later than 30 days after submittal and prior to the department's review of the contingency plan.
5. Overpayments of application fees are refundable upon written request.

## 2.6.2 Interpretations

**Refunds:** An operator is eligible for a fee refund within thirty days of the application submittal if the Agency has not already started the approval review. Because a complete ODCP approval application includes the proper fee, a request for a refund is considered a request to withdraw the ODCP approval application. Circumstances in which such a request is acceptable include: (1) closure of ASTs at the facility such that the facility storage capacity is reduced to below 25,000 gallons; or (2) change of facility operator. To obtain a refund in such cases, the operator must submit a written refund request stating that the facility is no longer in operation, that its storage capacity is reduced below 25,000 gallons, or that the operator has changed. Tank registration forms reflecting the stated change of capacity or operator or facility closure must be completed in accordance with 9 VAC 25-130-70 and submitted with or prior to the written refund request.

**Calculating the Thirty Day Deadline:** Checks accompanying ODCP approval applications receive a date stamp when the Agency receives them. The day following the date stamp counts as day one and subsequent calendar days are counted to thirty. Note that the recorded receipt of payment may not necessarily be the Effective Date of the ODCP.

**Overpayments:** The most common reason for overpayment is the inclusion of commodities and or storage capacity not subject to the regulations. There is no time limit on a refund request for the overpayment of fees. Appendix B - Refunds and Overpayments contains additional procedures associated with this section.

## 2.7 Notices

Except as provided in 9 VAC 25-90-60, Virginia Regulation 9 VAC 25-90-70 sets out requirements for providing notices to the Department.

### 2.7.1 Notice Provision

9 VAC 25-90-70. Notices to the Department of Environmental Quality (DEQ)  
All written correspondence to the Department of Environmental Quality related to the requirements of this chapter, with the exceptions of (i) the correspondence which contains fees and therefore must be paid directly to the Treasurer of Virginia as specified in 9VAC25-91-60 A and (ii) variance petitions as specified in 9VAC25-91-160 shall be addressed to the cognizant DEQ regional office. A list of regional offices and their addresses are available from the central office at the following address:

Mailing Address:  
Department of Environmental Quality  
Office of Spill Response and Remediation  
P.O. Box 10009  
Richmond, VA 23240-0009



Street Address:

Department of Environmental Quality  
Office of Spill Response and Remediation  
629 E. Main Street  
Richmond, VA 23219

### **2.7.2 Interpretation**

Most correspondence to the Department of Environmental Quality related to the requirements of this chapter must be addressed to the DEQ Regional Office in which the facility is located. Correspondence that contains fees must be sent to the Office of Financial Management at DEQ's Central Office, and checks must be payable to the Treasurer of Virginia. Variance petitions as specified in 9 VAC 25-91-160 must be sent to the Office of Spill Response and Remediation at DEQ's Central Office.

Appendix C contains a map of Regional Offices and their addresses.

Following are the Central Office addresses:

For correspondence containing fees:

Mailing Address:

Department of Environmental Quality  
Office of Financial Management  
P.O. Box 10150  
Richmond, VA 23240-0009

Street Address:

Department of Environmental Quality  
Office of Financial Management  
629 E. Main Street  
Richmond, VA 23219

For variance requests:

Mailing Address:

Department of Environmental Quality  
Office of Spill Response and Remediation  
P.O. Box 10009  
Richmond, VA 23240-0009

Street Address:

Department of Environmental Quality  
Office of Spill Response and Remediation  
629 E. Main Street  
Richmond, VA 23219

## **2.8 Delegation of Authority**

Through 9 VAC 25-91-80 the State Water Control Board delegated to the Director of DEQ the authority to perform any act of the Board provided for in 9 VAC 25-91-10 et seq., except as limited by **CODE** § 62.1-44.14. That section prohibits delegation of the adoption and promulgation of standards, rules and regulations; the revocation of certificates; and the issuance, modification, or revocation of orders. The Director, in turn, delegated the authority to approve ODCPs to certain Regional staff members.

## **2.9 Periodic Evaluation of the Regulation**

The following provision requires the evaluation of the regulation every three years, at which time the Agency accepts public comment on amendments and initiates amendments that Agency staff recommend.

9 VAC 25-91-90. Evaluation of chapter.

Within three years after the effective date of this chapter, the department shall perform an analysis on this chapter and provide the board with a report on the results. The analysis shall include (i) the purpose and need for the chapter; (ii) alternatives which would achieve the stated purpose of this chapter in a less burdensome and less intrusive manner; (iii) an assessment of the effectiveness of this chapter; (iv) the results of a review of current state and federal statutory and regulatory requirements, including identification and justification of requirements of this chapter which are more stringent than federal requirements; and (v) the results of a review as to whether this chapter is clearly written and easily understandable by affected entities.

Upon review of the department's analysis, the board shall confirm the need to (i) continue this chapter without amendments, (ii) repeal this chapter or (iii) amend this chapter. If the board's decision is to repeal or amend this chapter, the board shall authorize the department to initiate the applicable regulatory process to carry out the decision of the board.

## **2.10 Contingency Plan Requirements**

### **2.10.1 Best Available Technology Requirement**

**CODE** § 62.1-44.34:15 prohibits an operator from causing or permitting the operation of a facility unless the operator has submitted an oil discharge contingency plan to the Board and received Board approval of the plan. This code section also requires that all plans provide for the use of the best available technology. Virginia Regulation 9 VAC 25-91-

170.A indicates that best available technology is that which is economically feasible, proven effective and reliable and compatible with the safe operation of the facility at the time the plan is submitted for approval.

### **2.10.2 Best Available Technology Interpretations**

**Measures to Limit the Outflow of Oil:** Virginia Regulation 9 VAC 25-91-170.A.11 requires a contingency plan to include measures to limit the outflow of oil in the assessment of a worst case discharge. The most common means of controlling the discharge of oil from aboveground storage is installation of a secondary means of containment (SPCC), remote impounding, or remote impounding by diking (NFPA 30), all of which meet the best available technology standard because they are economically feasible, effective, reliable and compatible with the safe operation of the facility. Where an operator presents some other means of controlling the discharge of oil in its contingency plan, the Agency will evaluate the other means to determine whether it meets the best available technology standard.

ODCP approval requires certification by a professional engineer stating that the secondary means of containment, remote impounding or remote impounding by diking has been evaluated and certified to be in compliance with the applicable requirements of 40 CFR Part 112 (1997), NFPA 30, and 29 CFR Part 1910.106.

### **2.10.3 Plan Elements**

Virginia Regulation 9 VAC 25-91-170.A sets out the elements that the operator must include in order for a contingency plan to be approvable. Appendix D contains a detailed discussion of these elements.

### **2.10.4 Application Form and Certification**

**Virginia Regulation 9 VAC 25-91-170 B states the following:** All nonexempt facility operators shall file with the board the application form for approval of the contingency plan. This form shall be submitted with the required contingency plan and shall be completed insofar as it pertains to the facility. The operator shall sign and date the certification statement on the application form. If the operator is a corporation, the form shall be signed by an authorized corporate official; if the operator is a municipality, state, federal or other public agency, the form shall be signed by an authorized executive officer or ranking elected official; if the operator is a partnership or sole proprietorship, the form shall be signed by a general partner or the sole proprietor. All forms shall be acknowledged before a Notary Public.

Change of Operator or Sale of Facility: Where the operator changes or the facility is sold, the new operator must submit an updated application form within 30 days of the change or sale. No additional fee is required solely for the change of operator.

### **2.10.5 Plan Submittal and Recordkeeping Requirements**

Virginia Regulation 9 VAC 25-91-170 C provides as follows:

Contingency plans shall be filed with and approved by the board. The plan shall be submitted to the board at the address specified in 9 VAC 25-91-60 A. A copy of the original with the facility-specific information and the approval letter shall be retained at the facility and shall be readily available for inspection.

Appendices A and F contain procedures relating to the filing and approval of contingency plans.

### **2.10.6 Multiple Facility Contingency Plans**

Virginia Regulation 9 VAC 25-91-170 D provides as follows:

An operator of multiple facilities may submit a single contingency plan encompassing more than one facility if the facilities are located within the defined boundaries of the same city or county or if the facilities are similar in design and operation. The plan shall contain site-specific information as required by subsection A of this section for each facility. The site-specific information shall be placed in appendices to the plan.

Upon renewal of an approved contingency plan submitted under this subsection, the board shall consider the individual facilities subject to all provisions of subsections E through J of this section.

This provision allows the submission of a single plan where an operator's facilities are of similar design and operation or are located within the same city or county. This provision thus eliminates the need for duplicative planning efforts for operators who own or manage multiple facilities. By allowing the submission of a single plan, the provision also reduces the amount of application fees for multiple facility operators. Regional Office inspectors review design and operation information about the facilities to determine whether the facilities within a plan are of a similar design and operation. Appendix A contains the procedures for review and approval of multiple-facility contingency plans.

### **2.10.7 Plan Updates**

The following regulatory provisions set out the requirements for plan updates:

9 VAC 25-91-170 E Submittal of plans for approval

Oil discharge contingency plans shall be reviewed, updated if necessary and resubmitted to the board for approval every 60 months from the date of approval unless significant changes occur sooner. Operators shall notify the board of significant changes and make appropriate amendments to the contingency plan within 30 days of the occurrence. For the purpose of this chapter, a significant change includes the following:

1. A change of operator of the facility;
2. An increase in the maximum storage or handling capacity of the facility that would change the measures to limit the outflow of oil, response strategy or operational plan in the event of the worst case discharge;
3. A decrease in the availability of private personnel or equipment necessary to remove to the maximum extent practicable the worst case discharge and to mitigate or prevent a substantial threat of such a discharge;
4. A change in the type of product dealt in, stored or handled by any facility covered by the plan for which a MSDS or its equivalent has not been submitted as part of the plan; or
5. A change in the method or operation utilized for the early detection of a discharge to groundwater (i.e., change in a method of leak detection).

#### 9 VAC 25-91-170 F Update of plans

Updated plans or certification for renewal of an existing plan shall be submitted to the board for review and approval not less than 90 days prior to expiration of approval of the current plan. Submittal of the certification for renewal for an existing plan shall be made in accordance with the provisions of subsection B of this section. All notifications of changes, renewals, submissions and updates of plans required by this chapter shall be directed to the respective regional office

**When to submit a plan or plan update:** Operators must submit the complete plan, fee and application at least 90 days before commencement of facility operations or expiration of the approval of the current plan.

**Calculating the renewal date:** The effective date of the ODCP is the starting point for the 60 months count. The discussion in Section 2.4.2 above explains how the effective date is determined. Formal approval letters include the expiration date of the plan.

**Updates required for relocation of a mobile facility:** When a mobile facility changes location the operator must submit the following updates to the ODCP:

**9 VAC 25-91-170 A 1.** Facility location and access by road must be updated. A copy of the 7.5-minute quad USGS topographic map with the new location must be included. A clear photocopy of the map may be submitted, as long as the quadrangle name is noted.

**9 VAC 25-91-170 A 6.** The listing of state and local emergency response telephone numbers must be updated for the new locality.

**9 VAC 25-91-170 A 11.** Though the worst-case oil spill volume will likely be the same wherever the plant is located, the measures to limit the flow of oil and response strategies need to be addressed for the new site.

**9 VAC 25-91-170 A 13.** Include a listing of surface waters, public water supplies, and other resources at risk from the worst case discharge from the new location. Also include the priorities and strategies for protection of these resources.

**9 VAC 25-91-170 A 14.** Include any municipal resources, such as public water supply intakes, storm drains or sanitary sewer manholes or lines that may be affected by the worst case discharge.

**9 VAC 25-91-170 A 18.** Although most mobile tanks are elevated and visual monitoring is the accepted method of leak detection, the system for the new site must be noted and the records of inspections maintained. Any site modifications made to comply with leak detection must be noted in the plan update.

No additional fee or revision of the application is required. The operator must notify both the Regional Office gaining the facility as well as the Regional Office losing the facility. The ID number of the relocated facility will change to reflect the regional designation.

### **2.10.8 Exercise of Contingency Plans**

Virginia Regulation 9 VAC 25-91-170 G provides as follows:

An oil discharge exercise may be required by the board to demonstrate the facility's ability to implement the contingency plan. The board will consult with the operator of the facility prior to initiating an exercise. Where appropriate, the board will ensure coordination with federal agencies prior to initiation of an exercise.

A critical part of emergency preparedness programs is the exercise of the response plans (i.e., a "spill drill"). A spill drill can range from a large scale equipment deployment exercise to a simple telephone notification call out. As part of the ODCP formal review process, facility operators conduct a notification exercise, the elements of which are set out in Appendix A. If DEQ initiates an exercise beyond the scope of a notification exercise, the protocol for planning, implementation and evaluation of the exercise will incorporate "A National Preparedness for Response Exercise Program (PREP) Guidelines" (USCG, August 1994).

Where an operator has conducted spill response exercises for other state or federal programs, the exercises count for ODCP approval provided that the same notifications in the ODCP are covered in the exercise and any deficiencies found during the exercise

have been corrected. Moreover, an operator's actual response to an actual oil spill can count as an exercise if the operator can document through the Notification Checklist that the appropriate notifications were made according to the ODCP.

The department will not initiate unannounced exercises.

#### **2.10.9 Denial or Modification of Plan Approval**

Virginia Regulation 9 VAC 25-91-170.H sets out the following provisions with respect to denying or modifying the approval of a plan:

The board may, after notice and opportunity for a conference pursuant to § 9-6.14:11 of the Code of Virginia, deny or modify its approval of an oil discharge contingency plan if it determines that:

1. The plan as submitted fails to provide sufficient information for the board to process, review and evaluate the plan or fails to ensure the applicant can take such steps as are necessary to protect environmentally sensitive areas, to respond to the threat of a discharge, and to contain and clean up an oil discharge within the shortest feasible time;
2. A significant change has occurred in the operation of the facility covered by the plan;
3. The facility's discharge experience or its inability to implement its plan in an oil spill discharge exercise demonstrates a necessity for modification; or
4. There has been a significant change in the best available technology since the plan was approved.

Operators of facilities subject to ODCP requirements must file and obtain approval of plans as a condition of operation. Consequently, to the extent feasible, the Agency assists operators with plan development. In cases in which the denial or modification of plan approval appears necessary, the operator may contest the denial or modification and request an informal conference. Appendix F contains informal conference procedures.

#### **2.10.10 Revocation of Approval**

Virginia Regulation 9 VAC 25-91-170 I identifies the circumstances in which the board may revoke plan approval.

That section provides:

The board, after notice and opportunity for hearing, may revoke its approval of an oil discharge contingency plan if it determines that:

1. Approval was obtained by fraud or misrepresentation;
2. The plan cannot be implemented as approved;
3. A term or condition of approval of this chapter has been violated; or
4. The facility is no longer in operation.

**ODCP Audits:** If an oil discharge occurs from a facility regulated by the ODCP program, an ODCP Audit may be conducted to determine if the operator implemented the plan. The ODCP Audit supplements, but does not replace, investigations conducted for the Pollution Response Program (PRP). Regional Office management determines whether to conduct an ODCP Audit and may base the decision on the size of the discharge and projected environmental damage. ODCP Audits are conducted where enforcement action may result in revocation of plan approval or extensive resource damage is likely to result in litigation.

**Facility No Longer in Operation or Storage Capacity Reduced to Below 25,000**

**Gallons:** If a facility is no longer in operation or the aboveground storage capacity is reduced to below 25,000 gallons, the operator may seek a revocation of plan approval. Revocation of plan approval in these circumstances is considered “non-adversarial” and the procedures described in Appendix G - ODCP Revocation apply. For questions regarding facility capacity, the capacity of aboveground storage tanks is included in the facility total until the tanks are permanently closed.

#### **2.10.11 Acceptance of Federal Contingency Plans**

Virginia Regulation 9 VAC 25-91-170 J provides as follows:

A Facility Response Plan (FRP) developed pursuant to § 4202 of the federal Oil Pollution Act of 1990, Pub. L. No. 101-380, 33 USCA § 2716 (1996), may be accepted as meeting the requirements of subdivisions A 1 through A 22 of this section. The operator shall submit a copy of the FRP and a copy of the currently valid FRP approval letter for the facility for review and approval by the board. The FRP shall contain a cross reference in order to index pages for the specific requirements of the ODCP. The FRP shall also contain the satisfaction of the requirements of subdivisions A 13 a and A 18 of this section. This information shall be resubmitted in accordance with the renewal period established by federal statute or regulation but in no instance shall the renewal period exceed five years. The board shall be notified of any plan amendments.

Many facility operators subject to the ODCP regulations are also required to submit response plans for other state or federal programs. The Agency supports the single plan concept and will accept plans for review, regardless of format, as long as all of the information in 9 VAC 25-91-170 A is included. In order to facilitate plan review, a



cross-reference must be submitted to show where the specific ODCP sections can be found. Operators must notify the Board of plan amendments.

### **3. Groundwater Characterization Study (GCS) and GCS Monitoring Well Guidelines**

#### **3.1 Introduction**

Virginia Regulation 9 VAC 25-91-170.A.13.a requires operators of facilities with aggregate aboveground storage or handling capacities of one million gallons or greater of oil to conduct a groundwater characterization study as part of the ODCP. Part V of the Facility and Aboveground Storage Tank Regulation (9 VAC 25-91-10 et seq.) contains further GCS and GCS well monitoring requirements. The purpose of the GCS is to determine baseline conditions and flow of groundwater within the geographic boundaries of the facility and to assess the potential threat to public health and the environment caused by an oil discharge to groundwater through a facility-wide groundwater characterization and groundwater quality inventory. The GCS provides information necessary to initiate containment, cleanup, and mitigation of an oil discharge to groundwater within the shortest feasible time based on risk to public health and the environment. The GCS must adequately characterize geology, hydrogeology, water quality and identify all potential migration pathways and potential receptors of groundwater contamination. Data from the GCS is the basis for any further site characterization that DEQ may require if a discharge occurs.

The following discussion provides a detailed explanation of the requirements necessary to complete a GCS and monitoring of the GCS wells. Operators are to use these guidelines to prepare the GCS and submit subsequent annual GCS monitoring reports.

#### **3.2 Deviations from GCS Procedures**

If an operator believes site specific conditions warrant deviation from these procedures, the operator may request approval for the proposed changes by filing a written request with the AST Program Manager, DEQ-OSRR, P.O. Box 10009, Richmond, VA 23240.

#### **3.3 GCS Requirements**

##### **3.3.1 GCS Report Format**

The preferred format for GCS reports is set out in Appendix H. A written report previously filed with another agency or DEQ may be submitted as the GCS if it contains the required information outlined in this guidance. The Table of Contents page must precede a report not submitted in the required format and must cross reference the page number(s) in the report with each topic heading listed in Appendix H. Additionally, the report must include the name and address of the facility, operator and consultant, if any, who prepared the report, and the date the report was submitted.

### **3.3.2 Surface/Subsurface Site Characterization**

This purpose of this part of the GCS report is to establish the relationship between facility activities and areas of potential groundwater contamination. This information assists in prioritizing groundwater protection areas.

All maps submitted in this report must be the same scale, 1 in. equal to not more than 200 ft. Alternate scale plot plans are acceptable if the information required of each map is adequately portrayed. Each map must indicate north, scale and date of production. All maps must be folded and contained within the report, rolled maps are unacceptable.

#### **(1.0) Facility Base Map(s)**

The map must identify and locate to scale all potential sources of contamination including tanks, truck loading areas, transfer stations and pipelines. Piping is defined as all above and below ground piping, such as piping from the manifold to the tanks, piping interconnecting tanks for transfer, piping from the tanks to the air eliminators and/or loading rack or dispenser facilities, loading rack and /or dispenser facility piping, venting piping, slop tank piping, piping to and from knockout tanks and /or vapor-recovery units, piping to and from processing, additive and filter units, bottom-water drain-off piping, piping to and from oil-water separators and holding tanks, piping to and from pressure-relief units, and product-delivery piping from the facility to somewhere else. Both in-use and abandoned piping must be included. The map must indicate piping burial depth, fill areas or any areas of known prior excavation and refilling.

Additionally, the facility map must identify and locate all potential surface/subsurface conduits (natural or manmade) such as springs, streams, rivers, underground storage tanks, underground utility lines, storm sewer lines and buried electrical conduits. The map also must indicate burial depths, orientation, and surrounding matrix (e.g., gravel, sand, and native soil).

#### **(2.0) Public and Private Water Well Map**

If necessary, a separate, smaller scale map must identify public and private water wells within a 1,000 foot radius of facility property boundaries. The map must include owner name, well depth and formation name (if any) of the drinking water aquifer. This may require searching county tax records or list of property owners and then conducting a water-well survey from this list. Other references include but are not limited to local and state health departments. The map also must include names and addresses of all property owners within a 1,000 feet of the facility boundaries and references used to obtain this information. This survey will reveal potentially threatened users of groundwater.

#### **(3.0) Site Topography Map**

This map must delineate surface topography by showing contours on a facility base-map overlay. The contour interval must be sufficient to clearly show the pattern of surface

water flow in the vicinity of the facility. For example, if relief is greater than 20 feet, a 5 foot contour interval must be used or if relief is less than 20 feet a 2 foot contour interval must be used. A larger contour interval must be used in mountainous areas to adequately show topographic profiles of the facilities. Topographic maps that are 7.5-min scale must not be used in this section, as the scale is too large.

Usually water-table contours mimic to some degree topographic contours. A large-scale topographic map provides a general indication of shallow groundwater flow patterns. Preferably, this map must overlay the site base map so the relationship between potential sources of contamination and areas of groundwater infiltration can be more readily identified. Part of this information can be obtained from well elevations, top-of-casing elevations of monitoring wells.

#### (4.0) Monitoring Well Location Map

Monitoring well locations must be delineated on the site base map overlay. A minimum number of monitoring wells must be installed to adequately characterize groundwater flow and quality at the facility. At least one upgradient well must be installed

A facility with complex geology requires more monitoring wells than one with simple geology. Factors that may require an increased number of boreholes are fracture zones encountered during drilling, suspected discontinuous units or pinchout zones, geologic formations that are tilted or folded, suspected zones of high permeability that would not be defined by drilling at large intervals, multiple groundwater flow orientations, and laterally transitional geologic units with irregular permeability.

### **3.3.3 Groundwater Characteristics**

Determining groundwater characteristics assists in calculating maximum potential migration rate, contaminant dispersion potential, and helps delineate quantities and rates of flow. This data helps in the selection of appropriate treatment options.

#### (1.0) Regional Geology Summary

This section of the GCS must describe regional stratigraphic and structural features, and major aquifers including depth, thickness, flow regimes, recharge and discharge zones.

#### (2.0) Site Geology Summary

This section must contain a summary of site specific geologic conditions including soil type, regolith type, rock type and petrology. It also must note any saprolite characteristics such as fractures, weathered quartz veins, hardpan, etc. that can influence fluid storage and migration. In sedimentary beds, features such as lensing, shoestringing and interfingering, and lithologies including graded beddings, cementation and leaching can influence flow.

### (2.1) Boring Logs

Boring logs must contain descriptions of soil type according to the Unified Soil Classification scheme (ASTM-2488); rock types and classification scheme identified; grain size using the Wentworth scale; fractions, sorting, color, and moisture content.

### (2.2) Cross Section

Types and thickness of strata from ground surface to the depth of the deepest monitoring well must be depicted in a correlated cross-section oriented parallel to groundwater flow direction. Additionally, groundwater elevations must be identified.

### (3.0) Monitoring Well Construction Summary

Monitoring well construction procedures must be summarized as well as depicted on boring logs. Prior to installing any monitoring wells, all aboveground and underground utilities, storage tanks, and piping must be identified and clearly marked to prevent accidental damage. The local Health Department must be contacted to determine whether a “private well permit” is required. Wells installed for the GCS will be used on a permanent basis to conduct groundwater monitoring required under 9 VAC 25-91-190, GCS well monitoring.

A sufficient number of single-cased or open-hole monitoring wells are required to adequately characterize groundwater at the facility. All single-cased or open-hole monitoring wells must be installed to monitor the uppermost water-bearing zone. If water is not encountered within 100 ft. of the surface then the boring location must be abandoned according to procedures discussed below.

### **Perched Water Zones:**

Localized perched water zones are not considered the shallowest aquifer. Down-gradient perched water zones must be screened and sampled in addition to the water-table aquifer. Perched water zones must be identified on all boring logs.

### **Facilities in Mature Karst Regions:**

In karst, system fluids typically travel in the vadose zone down the strata dip, through fissures or vertical joints and cavities, until the phreatic zone is reached. Fluids then usually flow along the strike to a head controlled discharge at a spring or series of springs. For this reason special techniques may be employed such as dye traces to map out migration routes before installing monitoring wells.

Hollow-stem auger, air rotary, and rock-coring drilling methods are acceptable to the Agency. Fluid rotary and cable tool drilling are allowed only after receiving written approval from the Agency.

### **Well Installation Procedures:**

Well screen must intersect the water table at all times. Typical placement is 10-ft. minimum of screen with 5-ft. screen above the water table. Longer screen lengths may be necessary in areas where large seasonal groundwater fluctuations occur.

The borehole diameter must be a minimum of 4 in. larger than the outside diameter (O.D.) of the well casing. For example, a 2.5-in.O.D. casing would require a minimum 6.5-in. diameter borehole. This allows for proper sealing of the annular space.

A minimum of 6 in. of filter-pack material must be placed under the bottom of the well screen to provide a firm footing. The filter pack must extend 2 ft. above the top of the screened section. A weighted tape must be used to help prevent bridging and ensure the proper placement of the filter pack. The filter pack must consist of clean, washed, well-sorted silica sand. Grading of the filter pack must be appropriate to the screen slot size and to the formation.

The filter-pack seal must consist of 2 ft. of bentonite pellets or granules placed above the filter pack. A weighted tape must be used to help prevent bridging and ensure the proper placement of the filter pack seal. If the bentonite seal is placed above the water table, the pellets must be hydrated. Hydration time for the bentonite pellets must be at least one hour.

The annular grout must extend from the top of the filter-pack seal to within 2 ft. of the surface. The annular grout is a mixture of Portland cement and 4 to 6 percent powdered bentonite by weight.

The final 2-ft. of annular space must be filled with concrete. Either a flush-mounted manhole with a watertight, bolt-down load-bearing cover or a stand-up wellhead cover must be installed. Flush-mounted wellhead covers are appropriate in high-traffic areas. Flush-mounted wellhead covers must be concreted in place and sloped so that surface drainage will be diverted. A locking, watertight cap must be used if surface completion is below grade. A locking cap and protective cover must be used on all wells completed aboveground. Metal identification plates that have been stamped with "Monitoring Well" the well number, well depth and screen length must be attached to each well.

Following well installation, well locations, ground surface elevations, and top-of-casing elevations must be surveyed either in reference to mean sea level or to a USGS benchmark. All surveyed elevations must be measured to the nearest 0.01-ft.

All soil cuttings must be drummed and handled in accordance with local, State, and Federal regulations until sampled for contamination.

#### (4.0) Abandonment of Boring Locations Summary

All borings not converted into groundwater monitoring wells must be filled with grout. The grout mixture consists of Portland cement and 4 to 6 percent powdered bentonite. A tremie pipe must be used to place the grout. The upper 2-ft. of the boring does not have

to remain filled at completion and may be filled with material appropriate for the location.

#### (5.0) Monitoring Well Development

Monitoring well development continues until the water column is free of visible sediment. If development procedures do not produce a water column that is sediment free, the well must be developed until pH, specific conductance, and temperature have stabilized. These measurements must be included in the GCS report. Bailing, pumping or surging are acceptable methods for well development.

All development water must be managed in accordance with local, State, and Federal laws and regulations and in a manner that will not cause pollution.

#### (6.0) Aquifer Characteristics

On-site slug tests must be conducted to provide representative estimates of the hydraulic characteristics of the aquifer such as hydraulic conductivity, transmissivity, rate of flow and specific yield. All test data must be included in the GCS report. Reporting units must be in ft/day where applicable.

Data points and groundwater flow direction and rate must be indicated on a groundwater contour map. If a perched water table is extensive throughout the facility, then a perched water zone map also must be submitted.

### **3.3.4 Soil and Groundwater Quality Evaluation**

The field investigator must keep a field notebook (preferably bound with numbered pages) to record sample collection procedures, dates, laboratory identification, sample collection location, and the name of the sampler. This information must be documented in addition to the chain-of-custody report. Any detected releases of petroleum products must be reported immediately to the appropriate DEQ Regional Office. The contact information for the Regional Offices is contained in Appendix C.

#### (1.0) Soil Sample Collection Summary

Soil samples must be collected during well installation using properly decontaminated split-spoon samplers. Upon opening the split-spoon sampler, the sample must be cut in half lengthwise. A sample from one side of the split spoon must be immediately placed into a sample container that is appropriate for the analysis. The jar must then be properly labeled and stored at 4°C or less until it is delivered to the laboratory.

Brass liners placed inside the split-spoon sampler must be used to collect samples when sampling cohesive soils classified in the field as inorganic or organic silts and clays using the USGS Soil Classification Scheme (ASTM-2488). Low permeability soils require

extensive handling when transferring to VOA sampling jars. To alleviate excessive soil handling, cap, seal and label the brass liner before preserving on ice. When using this sampling method, samples collected for laboratory analysis must come from the deepest liner in the slit-spoon sampler. Samples collected for headspace readings with an Organic Vapor Detector (OVD) [e.g., photoionization detector (PID) or flame ionization detector (FID)] must be collected from the brass liner located directly above the one selected for potential laboratory sampling. The use of vapor detection tubes or other screening methods is not acceptable.

#### (1.1) Organic Soil Vapor Monitoring Summary

Sample selection for laboratory analysis is based upon the headspace reading collected with an OVD. A sampling jar (mason jar or sealable plastic bag) must be half filled with a portion of the remaining sample. The covered sample must be allowed to volatilize for a minimum of fifteen minutes at a minimum of 68°F. If temperatures are cooler a longer volatilization time must be allowed. All samples must volatilize for an equal period of time. All OVD readings and sample depths must be submitted on boring logs as well as in a tabulated format.

#### (1.2) Soil Sample Selection Criteria

The following criteria must be used when selecting soil samples from each boring location for laboratory analyses.

If OVD readings and other field screening techniques (visual or olfactory) do not indicate contamination in the soil, then one sample must be collected immediately above the soil/bedrock interface or the water table.

If visible or olfactory observations indicate the soil is contaminated (e.g., heavy staining), then two samples must be collected: one where visible or olfactory observations indicate contamination and a second sample above the soil/bedrock interface or water table.

If readings indicate contamination in the soil, then two samples must be selected. One sample must be collected from the depth where the OVD screen recorded the highest level of contamination. The second sample must be collected immediately above the soil/bedrock interface or water table.

Upon collection, all samples immediately must be labeled, placed in a cooler, and chilled to approximately 4°C or less until they are delivered to the laboratory for analysis.

#### (1.3) Chain-of-Custody Procedures

A completed chain-of-custody form must accompany each groundwater sample. The person collecting the sample, the laboratory receiving the sample and all intermediary



persons with possession of the sample, must sign this form. Sample security must be maintained during all phases of transport.

## (2.0) Analytical Methods for Soil Samples

The GCS requires laboratory analysis of Benzene, Toluene, Ethylbenzene and Total Xylenes (BTEX), and Total Petroleum Hydrocarbons (TPH) in soil samples. Selection of sample analysis for TPH is more involved than selection of sample analysis for BTEX. To avoid the need for variances of methods used for TPH analyses, specific analytical methods are recommended below for TPH constituents. Other acceptable methods are listed in Table 4. All analytical data must be tabulated and results plotted on an isoconcentration map or overlay.

### (2.1) Selection of Analytical Methods

#### (2.1.1) Selection of analytical methods for BTEX Analysis

Soil samples must be quantitatively analyzed for BTEX using EPA Method 8020B with Purge and Trap Method 5030.

#### (2.1.2) Selection of analytical methods for TPH Analysis for Gasoline

For analysis of hydrocarbons that correspond to a range of C6 to C10 and a boiling point range between 60° and 220°F, either the Wisconsin Modified Gasoline Range Organics (GRO) Method, EPA 8015B-Gasoline Range Organics, or California GC/FID Method must be used

#### (2.1.3) Selection of analytical methods for TPH Analysis for Nos. 1 and 2 Fuel Oils, Nos. 1 and 2 Diesel, Kerosene, and Jet Fuel

For analysis of hydrocarbons that correspond to a range of C10 to C28 and a boiling point range between approximately 170° and 430°F, the Wisconsin Modified Diesel Range Organics (DRO) Method, EPA 8015B-Gasoline Range Organics, or California GC/FID Method must be used.

#### (2.1.4) Selection of analytical methods for TPH Analysis for Heavy Hydrocarbons (Crude Oil, Nos. 5 and 6 Fuel Oil, Used Oil, and Hydraulic Oil)

For analysis of heavy hydrocarbon mixtures that have a boiling point greater than 430°F the Wisconsin Total Recoverable Petroleum Hydrocarbons Method (TRPH), or EPA Method 418.1 Modified for soils must be used.

## (3.0) Groundwater Level Measurements

All water-level measurements, including total well-depth measurements, must be referenced from an established and documented point on the top of the well casing. Measurements must be correlated with mean sea level datum and measured to the nearest 0.01 ft. To measure static water levels an electronic water level indicator or steel tape and water finding paste must be used. Static water level measurements must be taken before each sampling event.

#### (3.1) Free Hydrocarbon Products

If free product or a sheen is encountered in a well, the release must be reported immediately to the appropriate DEQ Regional Office. Regional Office contact information is contained in Appendix C. Immediate actions to prevent any further release of the substance into the environment must be undertaken; and fire, explosion, and vapor hazards must be identified and mitigated.

Free-product removal must be conducted in a manner that minimizes the spread of contamination into previously uncontaminated zones. Recovery and disposal techniques such as hand-bailers to remove any free-product from monitoring wells must be used. Recovered by-products must be properly treated, discharged, or disposed of in compliance with applicable local, State and Federal laws and regulations.

The thickness of the hydrocarbon layer floating on groundwater must be measured. This can be done using an electronic measuring device or tape measure and petroleum-finding paste.

#### (4.0) Procedures for Groundwater Sampling for Laboratory Analysis

All groundwater monitoring wells must be sampled unless 0.01 ft. or more of free product is encountered. In cases where free product is encountered, the free product thickness must be documented to the nearest 0.01 ft. Groundwater sampling is not required as long as free product is present. All monitoring wells containing less than 0.01 ft. of free product must be sampled as described below.

Groundwater samples must be collected in a manner that reduces or eliminates the possibility of loss of volatile constituents from the sample. Samples must not be filtered. For collecting samples, a gas-actuated positive displacement pump or a submersible pump is preferred if pumping is required to sample. Disposable, Teflon or stainless steel bailers are acceptable for sample collection. Peristaltic pumps or airlift pumps must not be used. In order to keep agitation of the sample to a minimum, the bailer must be lowered slowly into the water column. For collection of volatile organic samples, the sample container must be filled completely, so that no air bubbles are trapped inside. All sample containers must be pre-cleaned and sealed by the distributor or laboratory. Each sample must be preserved in accordance with the analytical method's requirements.

Cross-contamination from transferring pumps, bailers, and/or other sample collectors or equipment from well to well can occur and must be avoided by decontaminating the sample collection equipment before samples are collected from another well. Dedicated (i.e., permanently installed) well pumps, while expensive, are often cost effective in the long term (quarterly sampling requirements) and ensure reliability.

Upon collection, all samples must be labeled and placed immediately in a cooler and chilled to approximately 4°C or less. The samples must be maintained at 4°C or less until they are delivered to the laboratory for analysis.

A completed chain-of-custody form must accompany each groundwater sample. The person collecting the sample, the laboratory receiving the sample, and all intermediary persons with possession of the sample, must sign this form. Sample security must be maintained during all phases of transport.

#### (5.0) Analytical Methods for Groundwater Samples

The GCS requires laboratory analysis of Benzene, Toluene, Ethylbenzene and Total Xylenes (BTEX), Methyl-tetra-butyl-ether (MTBE), and Total Petroleum Hydrocarbons (TPH) for groundwater samples. Selection of the analytical method for TPH is more involved than selection of methods for other analyses. To avoid the need for variances of methods used for TPH analyses, specific analytical methods are recommended below for TPH constituents. Other acceptable methods are listed in Appendix I. All analytical data must be tabulated and results plotted on an isoconcentration map or overlay.

#### (5.1) Selection of Analytical Methods for BTEX and MTBE Analysis

##### (5.1.1) Selection of Analytical Methods for BTEX Analysis

Groundwater samples must be quantitatively analyzed for BTEX and MTBE using EPA Method 8020B with Purge and Trap Method 5030, or EPA Method 602.

(MTBE concentrations are not always reported when a sample is analyzed by methods 8020B or 602. The lab must be directed to analyze the sample for both BTEX and MTBE.

##### (5.1.2) Selection of analytical methods for TPH Analysis for Gasoline

For analysis of hydrocarbons that correspond to a range of C<sub>6</sub> to C<sub>10</sub> and a boiling point range between 60° and 220°F, the Wisconsin Modified Gasoline Range Organics (GRO) Method or California GC/FID Method must be used. The PQL of the GRO method is 0.1 mg/L of water. The PQL for the California method is .5 mg/L of water.

##### (5.1.3) Selection of analytical methods for TPH Analysis for Nos. 1 and 2 Fuel Oils, Nos. 1 and 2 Diesel, Kerosene, and Jet Fuel

For analysis of hydrocarbons that correspond to a range of C<sub>10</sub> to C<sub>28</sub> and a boiling point range between approximately 170° and 430° F, the Wisconsin Modified Diesel Range Organics (DRO) Method or California GC/FID Method must be used. The PQL of the DRO method is 0.1 mg/L of water. The PQL for the California method is .5 mg/L of water.

(5.1.4) Selection of analytical methods for TPH analysis for Heavy Hydrocarbons (Crude Oil, Nos. 5 and 6 Fuel Oil, Used Oil, and Hydraulic Oil)

For analysis of heavy hydrocarbon mixtures that have a boiling point greater than 430°F, the Wisconsin Modified Total Recoverable Petroleum Hydrocarbons (TRPH) or Method 418.1 must be used. The PQL for TRPH is 1.0 mg/L or less in water samples. The PQL for Method 418.1 is 1.0 mg/L for water samples.

(6.0) Quality Assurance/Quality Control Procedures

This plan outlines objectives, operational procedures, and the means for assuring how data of known and acceptable quality can be obtained. It is not necessary for each GCS report to contain a Quality Assurance Project Plan (QAPP). However, each sampling and analytical firm must have a QAPP on file with the DEQ Oil Discharge Contingency Plan program.

(6.1) Field Quality Assurance

All sampling performed during the GCS must be conducted in accordance with the documented Field QA plan included in the QAPP. Field QA samples must be handled in an identical manner to actual samples. Results of the analysis of field and trip blanks must be included in the GCS report, and must be evaluated in the data assessment portions of the report.

(6.2) Field QA Groundwater Samples

Field QA samples will consist of trip blanks and field blanks. Trip blanks consist of the appropriate sample containers and preservatives that are filled with reagent grade water by the lab. Trip blanks are then taken into the field, placed in the cooler along with samples collected in the field, and analyzed to determine if the sample container, procedures, or transport process may be introducing contaminants into the sample. One trip blank must be included per sample event. If the analyses to be performed require different sample containers or preservatives, one trip blank corresponding with each type of analysis to be performed must be prepared

Field blanks, also called sampling blanks, must be collected during each groundwater-sampling event. The purpose of Field blanks is to determine if sample collecting procedures or the sample collecting equipment may be introducing contaminants into the samples. Field blanks are prepared by placing reagent grade

deionized water into the decontaminated sample collection device and filling the appropriate sample container(s) with this water. One field blank must be collected per ten wells sampled. If the GCS involves sampling less than ten wells, one field blank must be collected during each sampling event.

#### (7.0) Decontamination Procedures

Drill rigs and other equipment must be inspected before use to identify lubricant or fluid leaks that could be potential contaminant sources. All over-the-hole portions of the drilling equipment must be steam cleaned prior to use and as necessary between boring locations. All down-hole equipment (augers, drill rods, split-spoon samplers, tools, steel casing, and PVC screen and riser pipe, etc.) must be steam cleaned before use and between all subsequent boring locations.

Sampling equipment and monitoring equipment that is not pre-cleaned or disposable must be properly decontaminated before each use. The proper decontamination procedure is to clean with a laboratory grade detergent wash, triple rinse with distilled water, and then allow to air dry.

### **3.4 GCS Groundwater Well Monitoring**

The required report format is outlined in Appendix J. The report must include the facility name and address, operator, and consultant, if any, that prepared the report and the date the report was submitted. The report also must indicate whom to contact in case of questions.

#### **3.4.1 Monthly Gauging of GCS Wells**

Static water levels must be measured and recorded monthly. All water-level measurements, including total well-depth measurements, must be referenced from an established and documented point on the top of the well casing. Measurements must be correlated with mean sea level datum and measured to the nearest 0.01 ft.

#### **3.4.2 Quarterly Groundwater and Vapor Monitoring**

Quarterly vapor monitoring of all wells identified in the ODCP GCS must be conducted before collecting quarterly groundwater samples. Quarterly vapor monitoring consists of collecting one monitoring-well headspace measurement. Vapor measurements and quarterly visual groundwater monitoring results must be tabulated for each well sampled.

#### (1.0) Vapor Monitoring System Design

The two main components of a vapor monitoring system are the monitoring well and the vapor-monitoring device that must be able to detect at least 1 ppm of vapors. Fully automated vapor monitoring systems have permanently installed equipment to continuously gather and analyze vapor samples. A leak is detected when visual or

audible alarms are activated. The automated systems must be checked according to the manufacturers suggested maintenance schedules and records of maintenance schedules kept with monitoring records.

Manually-operated vapor monitoring systems range from equipment that analyzes a vapor sample on-site such as a PID or FID, to devices that gather a sample that must be sent to a laboratory for analysis. Monitoring results from manual systems are generally less accurate than results from automated systems. **Explosimeters that monitor oxygen levels are not oil-vapor monitoring devices and are not acceptable for vapor monitoring.**

#### (1.1) Maintenance and Calibration of Vapor Sampling Equipment

Equipment must be calibrated properly to detect vapors from product stored at the facility. Calibrations can consist of exposing the monitor to a pure gas standard to ensure the monitor correctly responds to vapors. Calibrations for portable monitors must be performed on a quarterly basis before quarterly vapor measurements are taken.

Maintenance of vapor monitoring sensors includes cleaning, calibration, and operations checks. Maintenance consists of recharging the electrical component and keeping the device clean. Some systems may require periodic replacement of a filament or a lamp. Additional information concerning vapor monitoring can be obtained from *Detecting Leaks, Successful Methods, Step-by-Step*, EPS Document No. EPS/5309/UST-89/012.

#### (2.0) Quarterly Groundwater Sampling (Visual Inspection)

Quarterly groundwater sampling of all wells identified in the ODCP Groundwater Characterization Study must be conducted. Quarterly groundwater sampling consists of (1) measuring free product on top of groundwater, and (2) collecting groundwater samples for visual inspection.

If present, the thickness of the hydrocarbon layer floating on groundwater must be measured. Measuring devices must be able to detect at least .01 ft. of free product on top of the groundwater. This can be done using an electronic measuring device, or measuring tape and petroleum-finding paste.

If free product or sheen is encountered in a monitoring well, the release must be reported immediately to the appropriate DEQ Regional Office. Appendix C contains contact information for the Regional Offices. Immediate actions to prevent any further release of the oil/petroleum into the environment must be undertaken and fire, explosion, and vapor hazards must be identified and mitigated. Detection of at least .01 ft. of free product on the top of groundwater indicates a reportable discharge. Any corrective action conducted must be approved in accordance with DEQ Regional Office guidance.

If sheen or product vapor is detected in the groundwater sample, a groundwater sample for BTEX and TPH laboratory analysis must be collected. Groundwater samples must be collected and analyzed as outlined above in the ODCP Groundwater Characterization Study guidance. If .01 ft. or more of free product is measured, then groundwater samples must not be submitted for laboratory analysis since a discharge is evident. All results of visual groundwater monitoring must be recorded.

### (3.0) Annual Groundwater Quality Evaluation

Annual groundwater sampling of all GCS wells identified in the ODCP Groundwater Characterization Study must be conducted. Annual groundwater monitoring consists of collecting groundwater samples for laboratory analysis. Groundwater samples must be collected and analyzed for BTEX, MTBE, and TPH from each well.

#### (1.0) Summary of Groundwater Collection Methods

All GCS groundwater monitoring wells must be sampled according to the procedures described below, unless .01 ft. or more of free product is encountered. Where .01 ft. or more of free product is encountered, free product thickness must be recorded.

##### (1.1) Groundwater Sample Collection

Groundwater samples must be collected in a manner that reduces or eliminates the possibility of loss of volatile constituents from the sample. For collecting samples, a gas-actuated positive displacement pump or a submersible pump is preferred if pumping is required to sample. Detected or disposable PVC, Teflon or stainless steel bailers are acceptable for sample collection. **Peristaltic pumps or airlift pumps must not be used.** In order to keep agitation of the sample to a minimum, bailers must be lowered slowly into the water column. For collection of volatile organic samples, the sample container must be filled completely, so that no air bubbles are trapped inside. All sample containers must be pre-cleaned and sealed by the distributor or laboratory. Each sample must be preserved with the proper preservative (i.e., HCL).

Cross-contamination from transferring pumps, bailers, and/or other sample collectors or equipment from well to well can occur and must be avoided by decontaminating the sample collection equipment before samples are collected from another well. Dedicated (i.e., permanently installed) well pumps, while expensive, are often cost effective in the long term (quarterly sampling requirements) and ensure reliability.

Upon collection, all samples must be labeled, placed immediately in a cooler and chilled to approximately 4°C or less. Samples must be maintained at 4°C or less until they are delivered to the laboratory for analysis.

##### (1.2) Chain-of-Custody

A completed chain-of-custody form must accompany each groundwater sample. The person collecting the sample, the laboratory receiving the sample, and all intermediary persons with possession of the sample, must sign this form. Sample security shall be maintained during all phases of transport.

#### (2.0) Summary of Groundwater Analytical Results and Interpretation

Laboratory analysis of BTEX, MTBE, and TPH for groundwater samples is required. Selection of the analytical method for TPH is more involved than selection of methods for other analyses. To avoid the need for variances of methods used for TPH analyses, specific analytical methods are recommended



## 4. Leak Detection

Pursuant to the Facility and Aboveground Storage Tank (AST) Regulation, 9 VAC 25-91-170 A.18, facilities with an aggregate aboveground storage capacity of 25,000 gallons or more must establish an early detection system for an oil discharge to groundwater. This leak-detection system must be installed for any AST that contains more than 660 gallons of storage capacity at these facilities, unless otherwise excluded by regulation.

The purpose of leak detection at AST facilities is to identify a discharge from these tanks and associated transfer piping to soil or groundwater in the shortest feasible time. Identifying leaks early reduces the threat of contamination to the environment and costs associated with soil and groundwater remediation. The following discussion presents leak-detection system options that comply with the Oil Discharge Contingency Plan (ODCP) Requirements, 9 VAC 25-91-170 A.18.

Operators must be able to demonstrate for the ODCP review that the leak-detection system installed at the facility is capable of detecting a leak from an AST and associated transfer piping in the shortest feasible time for that particular leak-detection system. This demonstration must include a preliminary site assessment report if performing groundwater or vapor monitoring. A leak detection notification form (Appendix K) must be submitted as part of the ODCP.

Leak-detection requirements for ASTs located in an oil-impacted area can be accomplished via corrective action monitoring required by the DEQ Regional Office **only** when the tanks and associated transfer piping have been tested for leaks and determined to be in satisfactory condition. This leak-detection option is acceptable only during the corrective action monitoring period and applies only to tanks and transfer piping located in an impacted area at the facility.

### 4.1 Summary of Leak Detection Options for ASTs and Associated Transfer Piping

Leak-detection options for ASTs and associated transfer piping are limited to methods that can detect leaks external to the tank. Conventional inventory-control technologies **are not** options that meet the ODCP leak-detection requirements. Statistical Inventory Reconciliation (SIR) is an alternative to leak detection and is included as an option when in the SIR Pilot Program.

The most desirable and cost-effective leak detection method for an individual site depends on the tanks, product stored, site conditions, business schedule, spill history, and other factors. Appendix L contains a table listing site and tank factors related to each method.

- ◆ Groundwater Monitoring;
- ◆ Vapor Monitoring;

- ◆ Interstitial Monitoring with Release Prevention Barriers (RPB);
- ◆ Visual Monitoring;
- ◆ Statistical Inventory Reconciliation (SIR).

## 4.2 Groundwater Monitoring

Groundwater monitoring for leak detection is restricted to use at sites where depth of groundwater is less than 20 ft. Restricting groundwater monitoring to sites with this hydraulic profile minimizes the potential for widespread environmental contamination, resulting in reduced cleanup costs. Facilities with 1,000,000 gallons or greater storage capacity may use the same wells required in the GCS for groundwater leak-detection monitoring **if depth to groundwater is less than 20 ft. below the ground surface and wells are placed to detect leaks in the shortest feasible time.**

### 4.2.1 How Groundwater Monitoring Works

- ◆ Groundwater monitoring involves the use of one or more permanent monitoring wells. The two main components of a groundwater monitoring system are the monitoring well (typically a 2-4 in. well diameter) and the groundwater monitoring device that must be able to detect at least 1/8-in. oil thickness in groundwater.
- ◆ Monitoring wells must be designed and sealed to avoid becoming a conduit for contamination. The slotted portion of the monitoring well casing must be designed to prevent migration of natural soils or filter pack into the well. In addition, the casing design must allow entry of oil in the water table under both high and low groundwater conditions. The wells also must be clearly marked and locked to avoid tampering and unauthorized access.

### 4.2.2 Requirements for Groundwater Monitoring

- ◆ Before installation, a preliminary site assessment is necessary to:
  - assure a groundwater depth of less than 20 ft.;
  - an estimated hydraulic conductivity of greater than 0.01 cm/sec (28 ft./day). If the hydraulic conductivity is less than 0.01 cm/sec, then supplementary monitoring wells are required to account for less permeable soil conditions;
  - determine a groundwater flow gradient and the range of groundwater fluctuation; and
  - determine that the wells are placed in a manner that is conducive to detecting a leak within the shortest feasible time.

- ◆ The assessment report must:
  - contain boring logs that classify the soil type beneath the site, indicate the screening interval of the monitoring well, and depth to groundwater;
  - include a facility map indicating the location of the groundwater monitoring wells and the groundwater flow gradient; and
  - be kept in the leak-detection section of the ODCP at the facility.
- ◆ Groundwater monitoring can only be used if the stored oil does not easily mix with water, floats on top of water, and has a specific gravity of less than one. Well screens must intercept the top of groundwater during periods of high and low groundwater fluctuations.
- ◆ Monitoring wells must be checked at least monthly for an indication of discharged oil from the AST or transfer piping. All leak-detection-monitoring records are to be kept on site for a period of five years. These records must include monitoring dates, personnel, procedures, and results for each well.
- ◆ Monitoring well placement is important and depends on site-specific conditions. If monitoring wells are placed inside the bermed area, they must be located in a manner that can detect a leak from an AST within the shortest feasible time without disturbing the integrity of the berm.
- ◆ Monitoring wells must be located in a manner that can detect a leak from underground transfer piping in the shortest feasible time. One monitoring well must be located in the upgradient groundwater flow direction of both the ASTs and associated underground transfer piping. All other monitoring wells must be located in the downgradient direction of the ASTs and piping.
- ◆ Depth to groundwater must be less than 20 ft. below the surface.
- ◆ Groundwater monitoring works best if the soil around and underneath the AST is sand, gravel, or other coarse materials that has an estimated hydraulic conductivity greater than 0.01 cm/sec (28 ft./day). If the soil around the tank is silt or clay and has a hydraulic conductivity less than 0.01 cm/sec, then supplementary monitoring wells are required around the tank area.
- ◆ Wells that monitor for underground transfer-piping discharges have the potential to cover an extremely large area due to long transfer piping runs. Leaks can occur in any portion of the line, especially at piping joints. Therefore, well placement depends on site-specific conditions. In general, wells must be no more than 20 to 45 ft. apart and placed in the backfill of the underground transfer piping.

- ◆ Continuous-monitoring devices or manual-monitoring methods must detect the presence of at least 1/8-in. of free oil on top of the groundwater in the monitoring well

#### **4.2.3 Groundwater Monitoring Detection Devices**

- ◆ Detection devices may be permanently installed in the well for automatic, continuous measurements of discharged oil. Automatic sensors include differential-float, oil-soluble, and thermal-conductivity devices. Automated sensors must be calibrated annually and checked monthly to ensure sensors are operational (i.e., the panel must be checked to determine if the warning light is flashing or tested to determine if the alarm sounds when the alarm button is pushed).
- ◆ Manual-detection devices are also available. Manual devices include clear, plastic bailers (used to collect a liquid sample for visual inspection), oil-sensitive paste, dissolving string-type sensors, and interface probes. Manual devices must be operated and results recorded at least monthly.

#### **4.2.4 Site Suitability**

Groundwater monitoring works best at sites where groundwater is between 3 and 10 ft. from the surface and there have been no previous discharges of oil that would falsely indicate a current discharge. If groundwater is less than 3 ft. below the surface, then special monitoring-well completion techniques must be used to insure an adequate seal is maintained around the monitoring well. Monitoring wells installed at facilities where free oil is present in groundwater from a previous discharge are not an effective means of leak detection, because a new discharge to groundwater cannot be distinguished from previous discharges. In such circumstances, an alternate method of leak detection must be employed.

#### **4.2.5 Other**

The proper design and construction of a groundwater monitoring system is crucial to effective detection of discharged oil and must be performed by an experienced professional. Before construction begins, the installer must identify, obtain, and comply with all state regulations, as well as local construction and drilling permits.

### **4.3 Vapor Monitoring**

Vapor monitoring must not be used at sites where soil conditions do not allow diffusion of vapors or where high groundwater, excessive rainfall, or other sources of moisture could

interfere with the operation of vapor monitoring for more than 30 consecutive days. Background vapor concentrations can also interfere with this monitoring. Vapor monitoring can be used at sites where depth to groundwater is greater than 20 ft.

#### **4.3.1 How Vapor Monitoring Works**

- ◆ Leak-detection vapor monitoring measures “vapors” from oil in the soil around the tank to determine if the tank is leaking. A preliminary site assessment must be performed before installing a vapor monitoring leak detection system to determine that wells are placed in a manner that detects a leak within the shortest feasible time. Vapor monitoring wells may be placed vertically, diagonally or horizontally underneath the tanks. Care must be taken to not disturb the integrity of the tank foundation.

#### **4.3.2 Requirements for Vapor Monitoring**

- ◆ The two main components of a vapor monitoring system are a monitoring well and a vapor monitoring device that must be able to detect at least 1 ppm of vapors or an added traceable substance from discharged oil in the soil.
- ◆ Before installation, a preliminary site assessment is necessary to determine the volatility of the stored oil or added traceable substance, the permeability of the soil surrounding the tanks and underground transfer piping, and the residual background vapors at a site. If the soil contains clay, then more monitoring wells may be required to account for the decreased permeability. The preliminary site assessment must consider soil moisture content, methane concentrations, and nearby active/abandoned underground or aboveground storage facilities that could possibly interfere with vapor monitoring. In addition, the report must contain boring logs that classify the soil type beneath the site and indicate the screening interval of the monitoring well. A facility map indicating the location of the vapor monitoring wells must be included. This assessment must be kept in the facility copy of the ODCP under the leak-detection section.
- ◆ The oil stored in the AST or an added tracing compound must vaporize into a quantity that is detectable by the monitoring device.
- ◆ Vapor monitoring wells must be checked at least monthly for the presence of oil vapors or for detection of the traceable compound from the AST or underground transfer piping.
- ◆ All leak-detection-monitoring records must be kept on site for inspections for a period of five years. These records must include monitoring and personnel procedures, monitoring dates, and results of inspections for each leak-detection monitoring well. If a traceable substance is used for detection

purposes, the monitoring records must include the quantity of the substance added, the concentration added, and the dates when the substance was added to the oil.

- ◆ The number of wells and their placement is important and depends on site-specific conditions. A preliminary site assessment must be performed before installing a vapor monitoring leak-detection system in order to determine that wells are placed in a manner that detects a leak within the shortest feasible time. If monitoring wells are placed inside the bermed area, they must be located to minimize the time it would take to detect a discharge without compromising the integrity of the berm.
- ◆ Soil surrounding the AST must be sand, gravel, or other permeable material that will allow vapors or added traceable compounds from the stored oil to move easily to the monitor. If soil permeability is low and clay soil is present, then additional monitoring wells are required around the tanks and piping. Vapor monitoring devices successfully operate in clay material if the number of monitoring wells is increased to account for low soil permeability.
- ◆ Monitoring wells must be designed and sealed to avoid becoming a conduit for potential contamination. The wells must be clearly marked and locked to avoid unauthorized access and tampering.
- ◆ Monitoring wells must be located to minimize the detection time of a leak from underground transfer piping. Wells that monitor underground transfer piping must monitor a large area because piping runs can be long, and leaks can occur in any portion of the line, especially at piping joints. Well placement is dependent on site-specific conditions. Wells must be no more than 20 to 45 ft. apart and placed in the backfill of the transfer piping. Well spacing density must increase to account for low soil permeability conditions.
- ◆ Soil surrounding the AST must be clean enough that any previous contamination does not interfere with the detection of a current leak. Continuous-monitoring devices or manual monitoring methods must detect the presence of 1 ppm of oil vapor or traceable compounds.

#### **4.3.3 Vapor Monitoring Detection Devices**

- ◆ Fully automated vapor monitoring systems have permanently installed equipment to continuously gather and analyze vapor samples. A leak is detected when visual or audible alarms are activated. The automated systems must be checked according to the manufacturers suggested maintenance schedules and records of maintenance schedules kept with monitoring records.

- ◆ Manually-operated vapor monitoring systems range from equipment that analyzes a vapor sample on-site such as photo-ionizations (PID) or flame ionization detectors (FID), to devices that gather a sample to be sent to and analyzed in a laboratory. Monitoring results from manual systems are generally less accurate than results from automated systems. Explosimeters that monitor oxygen levels are not oil-vapor monitoring devices and are not acceptable.

#### **4.3.4 Site Suitability**

- ◆ Vapor monitoring systems can be designed to overcome site problems, such as clay soil and background vapor readings. The operator must discuss any problems that may apply to the particular site with the equipment salesperson and contractor to ensure they have considered the problems and will compensate for them when installing the vapor monitoring system.

#### **4.3.5 Other**

- ◆ The proper design and construction of a vapor monitoring system is crucial to effective leak detection and must be performed by an experienced professional. Before construction begins, the operator must identify, obtain, and comply with all state regulations and local construction and drilling permits.

### **4.4 Interstitial Monitoring With Release Prevention Barrier**

An interstitial monitoring system for leak detection uses a release detection monitor to monitor the space between a release prevention barrier (RPB) and the AST tank bottom or associated transfer piping. The monitor can perform a channeling function to a port where visual monitoring for a leak occurs. This leak detection monitoring device is placed in the space between the tank bottom or piping and an RPB, known as the interstitial space. The RPB contains the discharge and channels the leak so the release-detection monitor in the interstitial space can detect it. Secondary containment, such as an earthen berm or dike, does not constitute an RPB.

#### **4.4.1 Components Necessary for Interstitial Monitoring to Work**

Interstitial monitoring for leak detection is a four component system:  
(1) tank bottom or transfer piping;

- (2) interstitial space - area between an RPB and the tank bottom/transfer piping;
- (3) leak detection device that is placed in the interstitial space; and
- (4) release prevention barrier.

### **Release Prevention Barriers (RPBs)**

An RPB means a non-earthen barrier that is impermeable; composed of material compatible with oil stored in the AST; meets proper engineering strength and elasticity standards; and functions to prevent the discharge of stored oil to state lands, waters and storm drains. It must contain and channel any discharged oil in a manner that provides for early leak detection through the required daily and weekly inspections.

### **Examples of RPBs**

- ◆ Double-bottom AST in which a second steel-bottom of the tank closest to the foundation or ground surface acts as the RPB
- ◆ Double-wall AST where the second wall that encapsulates the primary tank bottom acts as the RPB
- ◆ Reinforced flexible membrane liner that meets the criteria listed above for an RPB. The liner is typically placed on top of the existing tank bottom. Then a 4 to 6-in. sand layer is placed on top of the liner. The primary (new) tank bottom is then installed on top of the sand layer.
- ◆ Coated concrete qualifies as an RPB if the coating meets criteria outlined above for RPBs. (Concrete alone is not considered impervious and must be coated.)
- ◆ Double-wall piping systems where the outer piping is considered an RPB.

### **Release-Detection Devices**

Release-detection devices monitor the area between the tank and the barrier for leaks and alert the operator if a leak has occurred. They can be as simple as a dipstick or petroleum-finding paste used at the lowest point of the containment to determine if oil has leaked and pooled. Monitors can also be sophisticated automated systems that continuously check for leaks. The more sensitive the release detection device, the earlier a leak can be detected, providing a more effective early warning system.

Interstitial monitoring systems operate to detect leaks based on electrical conductivity, pressure, or fluid sensing, hydrostatic monitoring, visual monitoring, and vapor monitoring. Some monitors indicate the physical presence of the discharged oil, either detecting liquid or vapor phases. Other monitors check for a change in condition that indicates a hole in the tank, such as a loss of pressure or a change in the level of water between the walls of a double-walled tank.



#### **4.4.2 Examples of Interstitial Monitoring Systems for Leak Detection**

The following examples are not intended to give specific construction guidance, endorse any particular method or technology, or include regulations, codes, specifications or recommended practices. Rather, these examples are intended to show various applications of technologies and methods that industry has used to achieve interstitial monitoring for leak detection. System design and construction must incorporate corrosion and cathodic protection. The following examples include general corrosion protection methods. Corrosion professionals must perform site-specific evaluations.

##### **Washed-Sand Layer with an RPB Liner**

A washed-sand layer with an RPB liner application provides an interstitial area to an existing AST retrofitted with a primary (new) tank bottom. Installation requires the existing tank bottom to be cleaned and repaired. A high-density polyethylene (HDPE) liner or a reinforced flexible membrane liner (80-120 mil thick) is then typically placed on top of the existing tank bottom. Next, a 4- to 6-in. washed-sand layer is placed on top of the liner. Finally, the primary (new) tank bottom is installed above the sand layer.

Prior to installation the operator must consider the type of RPB liner to be used. The RPB liner must be compatible with the oil stored. If the existing tank bottom consists of riveted joints or is not relatively smooth, a reinforced liner that is at least 30 mil. thick and more durable than a thinner HDPE liner must be used. This provides additional protection against penetration. In lieu of the more durable liner, a 1-in. sand layer can be placed on the old tank bottom along with an HDPE liner that is typically 100 mil thick. The washed-sand layer is then placed on top of the liner.

The RPB liner integrity can be verified by a “holiday test” provided there are no coatings on the tank bottom that will impede conductivity. A holiday test uses an electrostatic arc that is drawn to metal surfaces below a liner tear or puncture. This test identifies holes or punctures that may occur when placing the liner on a tank bottom or metal surface.

Silica-washed sand that has non-corrosive characteristics such as 7 to 9 pH, 50,000-ohms/cubic cm, or greater resistivity and salt-free characteristics must be used. The sand must be kept dry during installation. The primary (new) tank bottom must be welded, both inside and out, to the outer tank shell for structural integrity and to prevent moisture from accumulating in the interstitial space. Recommended practice API 653 must be followed.

The leak detection system consists of slotted or perforated (PVC or plastic) pipes placed within the radius of the sand layer spaced at 12- to 20-in. intervals at the system’s outer tank-bottom ring. Slotted or perforated piping must extend through the outer shell of the tank to monitor for oil in event of a leak. Fabric or pea gravel must be placed around the slotted pipes to prevent clogging. Pipes

must be capped with a manual ball valve that can be opened and checked for leaks either by routine visual inspections or with a hydrocarbon probe.

Placing sacrificial zinc-ribbon anodes close to the liner can provide cathodic protection. Anodes are spaced closely (2- to 3-in. intervals) to provide adequate protection. Where the sand layer is 8 in. or more, an impressed current system with a mixed-metal oxide-anode grid system could be applied. The operator must refer to API 653 and 651 recommended practices and corrosion professionals for sight-specific evaluation.

**Advantages:**

- ◆ The liner acts as the RPB, therefore it is not totally dependent upon the integrity of the existing tank bottom.
- ◆ The system does not require sophisticated construction procedures and is economical compared to other approaches.
- ◆ Sand is relatively easy to install and requires no mixing or additives.

**Disadvantages:**

- ◆ Equipment can penetrate the RPB during new tank bottom installation and compromise the system's integrity. Care must be taken when installing the primary (new) tank-bottom's steel plates.
- ◆ Anodes can be damaged during placement of the new tank bottom.
- ◆ The leak-detection system may not give an immediate warning when a leak occurs in the upper tank bottom.
- ◆ Characteristics of the washed sand must be specified and verified before installation to ensure composition of non-corrosive materials to ensure prevention of tank-bottom corrosion.
- ◆ Leaking areas are more difficult to repair.

**Concrete-Support System with an RPB Membrane Liner**

The concrete-support system with an RPB membrane liner provides an interstitial area to an existing AST retrofitted with a primary (new) tank bottom. Installing a concrete-support system with an RPB membrane liner requires the existing tank bottom to be cleaned and repaired, if necessary. Then an RPB (HDPE or reinforced liner) is placed on top of the existing tank bottom. Next, 4 to 6-in. of fiber-reinforced (low-slump mix, 3000 psi.) concrete is poured over the liner. The concrete bottom is shaped to provide adequate slope to a sump for leak detection. The primary (new) tank bottom is then installed on top of the concrete. Non-shrink concrete is preferred for this application, minimizing the possibility of subsequent cracking. API recommended practices must be followed.

The operator must consider the type of liner to be used prior to installation. An RPB liner must be compatible with the oil product stored. Where the tank bottom

consists of riveted joints and is not relatively smooth, a heavier liner such as that discussed under the washed-sand alternative provides durability and protection against penetration. In lieu of the more durable liner, a 1-in. sand-layer cushion can be placed on the old tank bottom in conjunction with an RPB (HDPE liner). The RPB liner integrity can be verified by a “holiday test.” Again, API recommended practices must be followed.

For concave bottoms, the concrete media must be sloped to a sump and formed with a series of channels or grooves along the surface area in order to collect any discharged oil that could come from the primary (new) tank bottom. The channels can be formed using pipe impressions or similar techniques. Channels are sloped to a central collection point with a drainpipe extending to an observation port. For convex bottoms, piping must be installed at 12 to 20-in. intervals at the system’s outer ring through the tank shell. Leaked oil migrates via the piping to the outer tank shell where it can be detected. As in the washed sand with an RPB method example, monitoring valves can be installed. Also, corrosion-protection installation must be considered.

**Advantages:**

- ◆ Sophisticated construction procedures are not required. Concrete can be poured and shaped to support any configuration of the primary (new) bottom.
- ◆ Concrete stays in place during installation of the new tank bottom.
- ◆ Concrete grooves allow immediate detection of discharges because grooves are tied to a sump and a monitoring port. Detecting any discharged oil migrating through a sand layer or other media takes longer.

**Disadvantages:**

- ◆ Care must be taken while placing the concrete to prevent tearing the RPB liner.
- ◆ Corrosion protection is not provided below the primary (new) tank bottom. Condensation can occur between the concrete and the new tank bottom and subsequently create severe corrosion problems.
- ◆ This application may be more expensive than other alternatives.
- ◆ Tank bottom defects can cause the concrete to crack. Leaked oil could become trapped within the concrete, and repairs would be difficult. Oil in the concrete would have to be purged before the primary (new) tank bottom could be repaired. If oil trapped in the concrete can not be purged, the primary-bottom steel plates would have to be cold cut to remove oil in the interstitial area.

**Double-Steel Bottom Application**

The double-steel bottom application provides an interstitial area to existing ASTs retrofitted with new tank bottoms. It becomes an RPB only after the existing tank

bottom is cleaned, repaired and tests satisfactory. A structural support system is placed on the top of the existing tank bottom and the primary (new) bottom is installed on top of this support system. Recommended practices API 653 must be followed.

The structural support system can be constructed with emphasis on a design that prevents excessive deflections from loads on the new tank bottom. Alternatives that can also provide support include angled iron channels and expanded metal or steel gratings. The structural system must allow for an interstitial space between existing and primary (new) tank bottoms to collect and detect any leaking oil. Recommended practices API 653 must be followed.

The interstitial space between the two tank bottoms must form an airtight compartment and be purged with an inert gas such as nitrogen (+98%) to remove oxygen. This creates a non-corrosive atmosphere within the interstitial space, providing corrosion protection for the primary (new) tank bottom interior.

A fully automatic leak detection system can be installed with pressure-sensitive sensors or fiber optics within the interstitial space. An increase in pressure indicates a leak within the upper, new tank bottom as a result of oil entering the interstitial space. Pressure loss indicates a failure in the lower, existing tank bottom. Corrosion protection for the existing tank bottom may be required.

#### **Advantages:**

- ◆ Structural support systems can be easily installed and this application appears to be comparable in cost to the “washed-sand-with-liner” system.
- ◆ Leak detection can be performed by visual monitoring of a gauge or with audible alarms. A dual-monitoring system can be installed that uses both pressure sensors and fiber optics to detect leaks to the interstitial space.
- ◆ An airtight interstitial space purged of oxygen provides corrosion protection.
- ◆ Leaks can be found and repaired easily. Pressure changes within the interstitial space indicate whether a leak exists in the primary (new) or secondary RPB (existing) tank bottom. The tank and interstitial space can be drained and the leak location can be identified by methods such as acoustic emissions testing.

#### **Disadvantages:**

- ◆ Fabricating a structural-support system is more difficult where the primary (new) tank bottom is sloped or is shaped differently than the existing tank bottom.
- ◆ The airtight interstitial space requires primary (new) tank bottom plates to be welded to the outer tank shell on both the top and bottom. Achieving quality welds on the under side of the new tank bottom may be difficult and may require excavation around the outer wall of the tank.

- ◆ Integrity of the existing tank bottom must be evaluated. The existing bottom's structural integrity may have corroded to the extent that it is not appropriate to use as an RPB or capable of achieving a sound, airtight space.
- ◆ The system's leak-monitoring equipment is more sophisticated, and personnel must be trained to maintain the more complex surveillance.
- ◆ False alarms may be more prevalent and require investigation.

### **Single-Bottom System with RPB**

System installation requires the foundation or sub-base to be prepared for the appropriate bearing capacity. A sand layer is first applied and contoured in either a convex or concave shape. Next, an RPB (a HDPE or reinforced liner) is placed on the contoured sand layer. Another sand layer, containing the monitor piping that channel any discharge, is laid down on the RPB. Convex-shaped system piping directs flow to observation ports around the tank perimeter while the concave-shaped system piping directs a discharge to a central collection sump and then to a single observation port. The tank is installed on the second sand layer.

A complete cathodic-protection system (mixed-metal oxide-anode grid system) with an impressed current is typically placed in the sand layer approximately 8 in. below the new tank bottom and above the membrane liner. Cathodic protection systems vary with construction materials and installation environment.

#### **Advantages:**

- ◆ This is an economical system for new tanks.
- ◆ An impressed-current cathodic-protection system can be installed.

#### **Disadvantages:**

- ◆ The containment system cannot be tested or verified for integrity. If the liner is penetrated or separated at the joints during placement of the sand layer, a leak and subsequent subsurface contamination would result.
- ◆ The cathodic-protection system can be damaged during placement of the primary bottom. Care must be taken when placing the bottom steel plates.
- ◆ Observation ports do not guarantee immediate detection. The entire sand layer could be contaminated before a leak in the primary bottom becomes apparent.

#### **4.4.3 Requirements for Interstitial Monitoring**

- ◆ A release-detection device must be installed in the interstitial space between the tank bottom and the RPB.

- ◆ The RPB must be a non-earththen impermeable barrier composed of material that is compatible with the oil stored in the AST. Impermeability must be considered as meeting a 72-hour or better rating. The RPB must meet proper engineering strength and elasticity standards and function to prevent the discharge of oil to state lands, waters, and storm drains. The RPB also must contain and channel any discharge to the release detection device for discovery. When selecting the RPB material, high temperature operations and product composition must be considered.

The same AST interstitial monitoring requirements apply to associated transfer piping.

- ◆ Interstitial release detection monitors must be checked at least monthly for the presence of oil from the AST or underground transfer piping. All leak detection-monitoring records must be kept on site for a period of five years to be reviewed in the event of an inspection. These records must include monitoring procedures, personnel, monitoring dates, results of inspections for each release detection monitoring device, and must demonstrate compliance with all of the requirements listed in this section.

#### **4.4.4 Site Suitability**

- ◆ Shallow groundwater and standing water may adversely affect methods of interstitial monitoring. Vapor interstitial monitoring will not function properly in saturated soils because the movement of vapor is slowed or prevented. Other methods might not detect a leak under high groundwater conditions if enough water is present to float the oil away from the test location.
- ◆ In areas with high groundwater or rainfall, it may be necessary to select a system that prevents moisture from interfering with the monitor. Protecting the tank bottom against corrosion must be considered when installing an RPB. Water or condensation gaining access to the tank bottom or interstitial space can disrupt the monitoring system's operation and increase corrosion rates. The elevation of the primary (new) tank bottom in relation to the secondary containment area is an important consideration in addition to how the interstitial area is sealed and how the primary tank bottom is welded.
- ◆ The existing tank bottom's structural integrity may affect the selection of the interstitial system type. Thickness, type of joints (welded or riveted), and extent of corrosion are necessary considerations.
- ◆ Different situations dictate different RPBs or liners. Some liners are not compatible with different oil types at various temperatures and will deteriorate rapidly. Durability, strength, seams, and installation requirements must be evaluated for each application.

- ◆ Significant differences exist in both cost and corrosion characteristics of sand and silica sand specified to have a 7 and 9 pH respectively and a resistivity in excess of 50,000 ohm/cubic cm.
- ◆ Tank diameters can change the cost advantages of each system. Double-bottom systems for small-diameter tanks may have a cost advantage over other containment structures.
- ◆ Operation and maintenance system requirements can determine the economic advantages. An important consideration is the level of training available to terminal personnel. Complexity of the leak-detection systems selected must not exceed the capabilities of personnel who will monitor and maintain equipment.
- ◆ Another important consideration is the quality assurance of system installation. The level of contractor and subcontractors sophistication, particularly that of the welder, is critical. Obtaining quality assurance and proper certifications ensure the system is installed properly. Dragging steel-bottom plates across the sand media can damage both the membrane liner and cathodic-protection system. The sand media must meet the characteristics specified. Welding procedures used must meet Section IX of the American Society of Mechanical Engineers (ASME) code. The operator must have the means to verify that the construction is performed according to the drawings and specifications.
- ◆ Technology is changing because the petroleum industry seeks better solutions to address current environmental problems. The operator's design engineer must be knowledgeable about the latest federal, state and local regulations and technology trends.

#### **4.4.5 Other**

- ◆ Trained and experienced installers are necessary for correct installation. Experienced installers are aware of installation and operation problems and how to deal with them. An API inspector certification program promotes facility operations and materials handling in a manner that protects the environment, as well as employee and public health and safety.

### **4.5 Visual Monitoring for Elevated AST/Piping**

- ◆ Where construction practices allow external access to the tank bottom, visual external inspections of the tanks can be conducted in accordance with API 653 Recommended Practices.
- ◆ Visual inspection of elevated tanks must be conducted on a weekly basis to determine if any leakage is occurring. The person conducting the inspection must look for signs of leakage, spillage, and stained or discolored soils.
- ◆ Where construction practices allow external access to the AST's associated piping, visual inspections of the piping can be conducted in accordance with API 570 or API 653 Recommended Practices.
- ◆ Visual inspection of elevated piping must be conducted on a weekly basis to determine if any leakage is occurring. The person conducting the inspection must look for signs of leakage, spillage, and stained or discolored soils.
- ◆ Weekly visual leak-detection monitoring records are kept on site for ODCP inspections for a period of five years. These records must include monitoring procedures, personnel, monitoring dates, results of inspections, and must demonstrate compliance with all of the requirements listed in this section.

## **4.6 AST Statistical Inventory Reconciliation (SIR)**

Statistical Inventory Reconciliation (SIR) is an acceptable alternative method for early detection of a discharge to groundwater for ASTs and associated piping. A facility's procedure for implementing this alternative method of early detection to determine if a discharge to groundwater has occurred must be documented and is reviewed as part of the facility ODCP.

### **4.6.1 How SIR Works**

- ◆ Statistical Inventory Reconciliation (SIR) analysis departs from conventional inventory control procedures in that the analysis discloses characteristic errors introduced to the product inventory data during the inventory measurement and record keeping process. These characteristic sources of error, which can be separately identified because they have a characteristic "fingerprint" in the inventory data, include the following:
  - overages or underages of product delivery;
  - meter errors;
  - blending errors;
  - non-standard tank geometry;
  - theft or pilferage;



- temperature effects upon delivery;
  - unrecorded additions or removals of product; and
  - spurious gauging observations.
- ◆ By identifying the nature and amount of these sources of error, the SIR analysis discloses their effects on inventory data. By reducing the “noise level” (i.e., erroneous information) in the data to that induced by the routine variations in product level observations, the analysis can then identify the irreducible losses in data suggestive of leakage.

#### 4.6.2 Requirements for SIR

- ◆ Tanks and piping must be proven liquid tight prior to initiating the use of SIR. As a requirement of renewal of ODCP approval, AST-SIR facility operators must demonstrate to the satisfaction of DEQ, that their tanks and piping have tested liquid tight. SIR cannot be used for such proof.
- ◆ Each SIR Provider and facility operator must explain fully how proper temperature correction will be achieved on a consistent basis.
- ◆ The operator must use a SIR Provider who has obtained independent third-party certification of the SIR Provider’s method.
- ◆ Facility operators must demonstrate the third-party approved method to DEQ prior to formal approval of the ODCP.
- ◆ Operators must be aware of and agree to comply with the SIR Provider’s criteria for data collection.
- ◆ Facility specific procedures for data collection must be in accordance with the SIR Provider’s criteria (including accurate meter calibration equipment, accurate temperature correction equipment, and site operator training in SIR) and records of collected data become part of the ODCP and are subject to review by DEQ.
- ◆ The SIR Provider must state in writing that the facility and procedures meet the criteria needed to implement SIR. A copy of this statement must be provided to DEQ AST Regional Office staff prior to formal ODCP approval.
- ◆ The facility ODCP must list criteria for reporting a discharge or a substantial threat of a discharge and procedures to be followed for verifying a threat of a discharge.
- ◆ Operators receiving a report from their SIR Provider of an **“inconclusive”** must follow procedures specified in their ODCP for reporting and verifying a threat of a discharge.

- ◆ Operators receiving a report from their SIR Provider of a **“fail”** must follow procedures specified in their ODCP for reporting a discharge. The operator is presumed to be causing a discharge of oil to state lands and must report the discharge to DEQ **immediately**.
  - All requirements of the “AST Statistical Inventory Reconciliation Checklist”(Appendix M) must be met and included in the ODCP.

#### 4.6.3 Information Provided in an SIR Analysis

- ◆ Given that a quantitative SIR system reports loss rates, thresholds, and minimum detectable leak (MDL) values, the appropriate criteria for declaring a **“pass”**, **“fail”**, or an **“inconclusive”** can be identified.
- ◆ An SIR procedure typically categorizes results as **“pass,” “inconclusive,”** or **“fail.”**
- ◆ In addition, a quantitative procedure also provides the following (in gallons/hour):
  - A numerical estimate of the leak rate, from the AST;
  - The threshold leak rate at which an SIR Provider would initiate the report that an AST has failed; and
  - The MDL rate, which specifies the smallest leak rate the SIR Provider is capable of detecting given a probability of detection of 0.95 or better.

**The data must be of adequate quality to achieve the following:**

##### MINIMUM DETECTABLE LEAK RATES (MDLs)

AST System Volume	Minimum Detectable Leak Rate (MDL)
30,000 gallons and less	.20 GPH (Probability of Detection of 0.95 & Probability of False Alarm of 0.05)
30,001-100,000 gallons	.35 GPH (Probability of Detection of 0.95 & Probability of False Alarm of 0.05)
greater than 100,000 gallons	.50 GPH (Probability of Detection of 0.95 & Probability of False Alarm of 0.05)

#### 4.6.4 Action Required Based on Test Results

**A report of a “pass”** If the calculated leak rate is less than or equal to the leak threshold, and the minimum detectable leak rate is less than or equal to the certified performance standard rate (MDL), the test result is **“pass.”**

- ◆ A **“pass”** means the AST tested is in compliance within the certified performance standard (the specified MDL rate) for the data set and time period (see table above). No action is required of the operator, other than record keeping.

**A report of an “inconclusive”** If the MDL rate exceeds the SIR Provider’s certified performance standard (0.2GPH; 0.35GPH; 0.50GPH) and the calculated leak rate is less than the leak threshold, the test result is **“inconclusive.”** If, for any other reason, the test result is not conclusive (i.e., **“pass”** or **“fail”**), the result is considered **“inconclusive.”**

- ◆ A report of an **“inconclusive”** indicates a higher than acceptable MDL rate which reflects a lapse in measurement and record keeping practices.
- ◆ An **“inconclusive”** report indicates that for that time period, no valid form of leak detection was being performed on the subject tank or piping.
- ◆ The facility operator must respond to a report of an **“inconclusive”** by reviewing inventory record keeping practices and/or instrumentation performance as may be recommended by the SIR Provider.
- ◆ Thirty days after the report of an inconclusive, an SIR analysis will be conducted on the previous ninety days of data.
- ◆ This ninety day analysis will generate a report of a **“pass”** (if the criteria specified below are met) or a **“fail.”** The MDL rate criteria for a ninety-day analysis are one half of those required for a rolling sixty-day analysis. This reduces the potential for product losses which may have been effectively masked by the excessive variability in the inventory data which caused the initial report of an **“inconclusive”** (Many SIR Providers normally use a rolling 60 days of data for their analyses.) **Otherwise, a report of a “fail” will be generated and a threat of a discharge investigative procedure will be implemented. Immediate reporting to DEQ is required.**

**AST/SIR Pass Criteria Following an Inconclusive Report (Gals/Hr)**

Tank Capacity	Loss Rate	Minimum Detectable Leak
30,000 gallons or less	0.00	.10
30,001-100,000	0.00	.17
greater than 100,000	0.00	.25

**A report of a “fail”** If the calculated leak rate is greater than the leak threshold, the test result is a **“fail.”**

- ◆ **A “fail” equates to a substantial threat of a discharge and must be reported to DEQ immediately.**
- ◆ Upon receipt of a report of a “fail,” the operator must:
  - implement all applicable provisions of the ODCP to contain and cleanup the discharge;

- initiate the investigative procedure in accordance with the ODCP; and
  - **notify DEQ immediately of the substantial threat of a discharge.**
- ◆ DEQ Regional Office staff will provide investigation/cleanup guidance.
  - ◆ The SIR Provider protocol may include, but not be limited to: a visual check of exposed components of the AST system; meter calibration checks; a validation of temperature probe functionality; and, record keeping practices.
  - ◆ The operator must retain a copy of the SIR Provider's protocol checklist.

#### **4.6.5 Site Suitability**

- ◆ The SIR Provider will analyze the facility; recommend any necessary upgrades in meters, calibration, and temperature correction equipment and based on the established performance criteria set by DEQ, determine whether SIR will work for the facility. Operator training in SIR is always prudent.
- ◆ Although there are no site specific criteria (i.e., soil types, depth to groundwater, etc.) tanks and piping must be demonstrated tight before acceptance of SIR as the release detection method.

#### **4.6.6 Other**

##### **Standard Report Format**

The standard format for reporting SIR results must list: location ID, tank ID, tank capacity, MDL standard for the tank, product stored, loss trend with minimum detectable leak, meets monthly standard? (Y/N), and remarks. A table containing this data is required.

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## Appendix A

### ODCP FORMAL APPROVAL

The Approval of an Oil Discharge Contingency Plan entails a review process that ensures the operator can protect environmentally sensitive areas and respond to the threat of a discharge within the shortest feasible time. The Formal Approval of the ODCP involves a qualitative review of the plan and a facility inspection to ensure that the operator can:

- 1. Protect environmentally sensitive areas.** The plan must contain notification procedures for downstream water users in the event of spill (9 VAC 25-91-170 A 6). The plan must identify resources that would be affected by the worst case discharge, establish priorities for protection and identify the means to protect these resources (9 VAC 25-91-170 A 13). A system to detect a discharge to groundwater also must be in place at the facility (9 VAC 25-91-170 A 18).
- 2. Respond to the threat of or the actual discharge of oil.** The plan must describe the location and physical description of the facility (9 VAC 25-91-170 A 1 and 3), the identity of the operator (9 VAC 25-91-170 A 2), and the tank inventory of regulated products stored at the facility (9 VAC 25-91-170 A 4 and 5). The plan must identify specific areas at the facility where the worst case discharge could occur and affect off-site natural resources as well as municipal services (9 VAC 25-91-170 A 11 and 14). The plan must show that the operator can conduct the appropriate notifications in the event of a discharge (9 VAC 25-91-170 A 6 and 7).
- 3. Contain, cleanup, and mitigate the effects of spill within shortest feasible time.** The most commonly used means of control of a catastrophic discharge from an aboveground storage facility is secondary containment or remote impounding as required by NFPA 30, "Flammable and Combustible Liquids Code" and 40 CFR 112.7, Spill Prevention Control and Countermeasures (SPCC). State Water Control Law (**CODE ' 62.1-44.34:15.B.**) requires plans to provide for the use of "best available technology. The ODCP must show how the operator will limit the flow of oil and implement the response strategy and the facility operational plan for the worst-case discharge (9 VAC 25-90-50 A 11). The operator must have private resources available for mitigation of the worst-case discharge (9 VAC 25-90-50 A 1), and the plan must include a list of containment equipment to be used in discharge event (9 VAC 25-90-50 A 12). The containment and recovery equipment listed or contracted must be appropriate to the size of the facility worst case discharge, and the personnel using the equipment must be trained in its use.

The detailed review of the contingency plan and facility inspection makes up the quality review of the operator's ability to meet ODCP regulatory requirements. The ODCP reviewer may use the Staff Activity Worksheets and Attachments that follow to ensure all ODCP elements are addressed and to document review results. A sample letter for notification of ODCP approval also follows.

Operator Contact Name \_\_\_\_\_  
Company \_\_\_\_\_  
Address \_\_\_\_\_  
\_\_\_\_\_

### OIL DISCHARGE CONTINGENCY PLAN APPROVAL

Dear \_\_\_\_\_:

This letter serves as approval of the Oil Discharge Contingency Plan submitted and reviewed according to 9 VAC 25-91-170 et seq. for the following facility:

\_\_\_\_\_

The approval is effective until expiration of the current plan on (*60 months from issuance date*). You are required to submit an updated plan to the department for review and approval not less than 90 days prior to this expiration date. All notifications of changes, submissions and updates of the plan required by the above mentioned regulation shall be directed to the Virginia Department of Environmental Quality, \_\_\_\_\_ Regional Office, \_\_\_\_\_, \_\_\_\_\_, VA \_\_\_\_\_.

Be advised that in the event of an oil discharge the facility operator must immediately implement all applicable provisions of the plan as well as all relevant requirements of Article 11 of the State Water Control Law (CODE ' ' 62.1-44.34:14-23).

If you have any questions regarding the contingency plan, contact \_\_\_\_\_ (regional planner) at \_\_\_\_\_.

Sincerely,

Regional Manager

cc:

AST Program Manager, OSRR



## **Appendix B**

### **REFUND AND OVERPAYMENT OF ODCP APPLICATION FEES**

An operator may obtain a **refund of application fees** within 30 days of receipt of the plan if the plan has not yet been approved. The operator must request a refund in writing.

Refunds for **overpayments of fees** may be made if the operator has tallied the facility storage capacity incorrectly, included tanks or products not regulated by the program or submitted duplicate fees. Refunds for overpayments are not dependent on the date of submittal. The operator must request a refund for overpayment in writing.

A regional staff memorandum confirming the circumstances of the refund or overpayment and the operator's written request are sent to OSRR. OSRR will forward a memorandum to the Office of Financial Management containing:

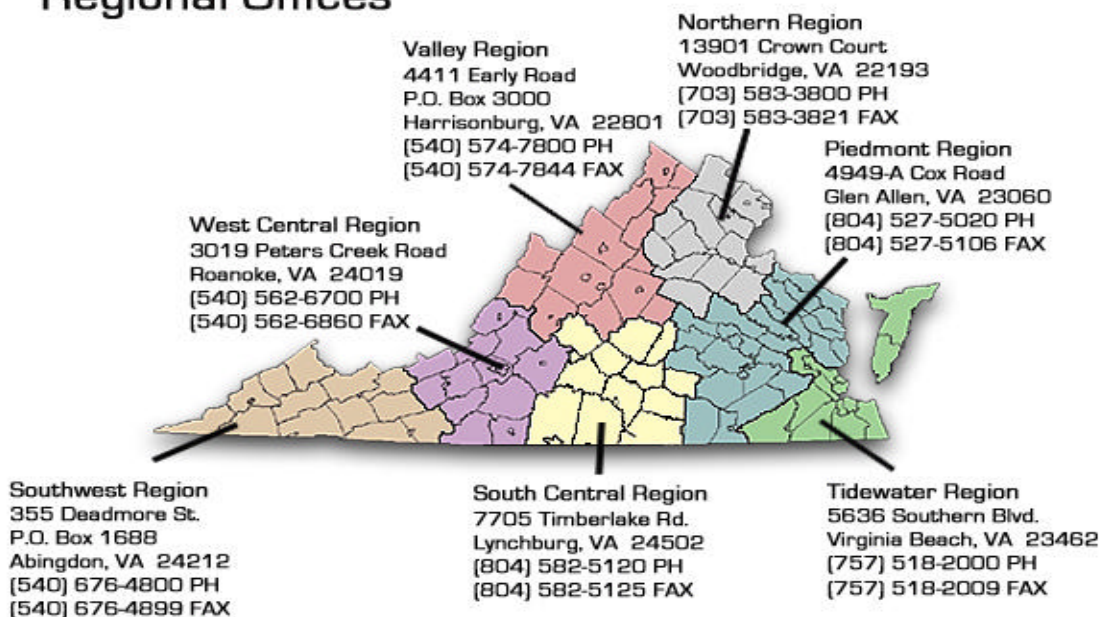
1. The reason for the refund, the amount and appropriate citations from 9 VAC 25-91-10 et seq. justifying the circumstance for a refund;
2. The ODCP program cost code 518/03/02/70311/611/0748; and
3. The facility name, mailing address, telephone number and contact person to whom the refund is to be sent.

A copy of the operator's written request for the refund should be attached to the memorandum.



## Appendix C

### Virginia Department of Environmental Quality Regional Offices



Regional Offices		Counties and Cities
<b>Northern Regional Office</b>	<b>Counties</b>	Arlington, Caroline, Culpeper, Fairfax, Fauquier, King George, Loudoun, Madison, Orange, Prince William, Rappahannock, Spotsylvania, Stafford, Louisa
	<b>Cities</b>	Alexandria, Falls Church, Fairfax, Fredericksburg, Manassas, Manassas Park
<b>Piedmont Regional Office</b>	<b>Counties</b>	Amelia, Brunswick, Charles City, Chesterfield, Dinwiddie, Essex, Gloucester, Goochland, Greensville, Hanover, Henrico, King and Queen, King William, Lancaster, Mathews, Middlesex, New Kent, Northumberland, Powhatan, Prince George, Richmond, Surry, Sussex, Westmoreland
	<b>Cities</b>	Colonial Heights, Emporia, Hopewell, Petersburg, Richmond.
<b>South Central Regional Office</b>	<b>Counties</b>	Amherst, Appomatox, Buckingham, Campbell, Charlotte, Cumberland, Halifax, Lunenburg, Mecklenburg, Nottoway, Prince Edward, Pittsylvania
	<b>Cities</b>	Danville, Lynchburg
<b>Valley Regional Office</b>	<b>Counties</b>	Albemarle, Augusta, Bath, Clarke, Fluvanna, Frederick, Greene, Highland, Nelson, Page, Rockbridge, Rockingham, Shenandoah, Warren
	<b>Cities</b>	Buena Vista, Charlottesville, Harrisonburg, Lexington, Staunton, Waynesboro, Winchester
<b>Southwest Regional Office</b>	<b>Counties</b>	Bland, Buchanan, Carroll, Dickenson, Grayson, Lee, Russell, Scott, Smyth, Tazewell, Washington, Wise, Wythe
	<b>Cities</b>	Bristol, Galax, Norton
<b>West Central Regional Office</b>	<b>Counties</b>	Alleghany, Bedford, Botetourt, Craig, Floyd, Franklin, Giles, Henry, Montgomery, Patrick, Pulaski, Roanoke
	<b>Cities</b>	Bedford, Clifton Forge, Covington, Martinsville, Radford, Roanoke, Salem
<b>Tidewater Regional Office</b>	<b>Counties</b>	Accomack, Isle of Wight, James City, Northampton, Southampton, York
	<b>Cities</b>	Chesapeake, Franklin, Hampton, Newport News, Norfolk, Portsmouth, Poquoson, Suffolk, Virginia Beach, Williamsburg



## **Appendix D**

### **Guidelines for the Preparation of the OIL DISCHARGE CONTINGENCY PLAN**

In 1990 the General Assembly amended the State Water Control Law concerning the Discharge of Oil to State Waters. Article 11 of that statute states that all operators of oil storage facilities must have an Oil Discharge Contingency Plan filed and approved by the Water Control Board before commencing operations. The ODCP Plan must provide assurance that the operator can take steps necessary to respond to an oil discharge and contain, cleanup, and mitigate the effects in the shortest feasible time. The Plan must also provide assurance of environmental protection in the event of a spill.

Facilities having less than 25,000 gallons are exempt from ODCP requirements.

#### **What should a Contingency Plan Contain?**

**1. The name of the facility, geographic location, and access routes from land and water.**

An accurate map or detailed road directions noting the location of facility is required. In order to facilitate the management of data concerning the location of the sites, an original 7.5 minute quadrangle USGS topographic map locating the facility should be submitted with the plan. If a photocopy is sent instead, the operator should ensure that the quad name is noted and the copy is large enough (11" x 17") to include two axes, i.e., a corner, of the map. If the facility is accessible by water the appropriate chart locating the facility should be included.

**2. The name of the operator of the facility including address and phone number.**

**3. A physical description of the facility including a plan of the facility showing, if applicable, oil storage areas, transfer location, control stations, above and below ground oil transfer piping within the facility boundary (and including adjacent easements and leased property), monitoring systems, leak detection systems, and location of any safety protection devices.**

It is important to have a complete description of the facility and a plan drawn appropriate to the size and complexity of the particular facility. Overlays or different plans may be used as needed. The location of dikes or other secondary containment structures surrounding tanks at the facility also should be included.

4. **A copy of the Material Safety Data Sheet (MSDS) or its equivalent for each oil, or groups of oil with similar characteristics, stored, transferred, or handled at the facility.**
5. **The maximum storage or handling capacity of the facility and the individual tank capacities, or in the case of a pipeline, the average daily throughput of oil.**

When listing the tank capacities, the products contained in them also should be noted.

6. **A complete listing, including 24 hour phone numbers, of all federal, state and local agencies required to be notified in the event of a discharge.**

This information should be available in the facility SPCC Plan. Notification of releases of flammable or combustible liquids have been required by the BOCA and NFPA 30 codes for some time and the reporting of releases should be a routine procedure at the facility. Phone numbers, especially for the local Fire Department or Haz Mat Response Team, must be current.

7. **The position title of the individual(s) responsible for making the required notifications and a copy of the notification check off list.**
8. **The position title, address, and phone number of the individual(s) authorized to act on behalf of the operator to implement containment and cleanup actions. This individual must be available on a 24 hour basis to ensure the appropriate containment and cleanup actions are initiated.**
9. **The position title of the individual(s) designated by the operator to ensure compliance with applicable federal, state and local requirements for disposal of both solid and liquid wastes during containment and cleanup of a discharge.**

For sections 7, 8, and 9 the name of the person responsible is less important than the title, as personnel changes can easily make the list out of date.

10. **Identification and ensurance by contract or other means acceptable to the Board, of the availability of private personnel and equipment necessary to remove to the maximum extent practicable the worst case discharge and to mitigate or prevent a substantial threat of such a discharge. This contract or agreement shall ensure an adequate response within the shortest feasible time. The Board will accept a letter of understanding between the operator and the response contractor(s) which attests to this capability being readily available. Membership in a cleanup cooperative or other response organization is also acceptable. A listing of contractor or cooperative capabilities, including an inventory of the equipment and specification of the other information required by 9 VAC 25-91-170.A.12. must be included unless these capabilities are already on file with the Board.**

The requirement to have equipment and personnel available to contain and cleanup an oil discharge is not entirely new. Waterfront facilities must comply with Coast Guard regulations as described in 33 CFR 154 where “each facility must have ready access to enough oil containment material and equipment to contain any oil discharged on the water from operations at that facility.” Current EPA regulations in 40 CFR 112.7 state that facilities without secondary containment have a “written commitment of manpower, equipment and materials for spill control

and removal....” NFPA 30 requires that equipment be available to prevent and minimize the escape of liquids in the event of accidental releases and to provide for the removal and disposal of the spilled material. Furthermore, the federal Oil Pollution Act of 1990 places the burden of planning and commitment of spill containment and cleanup on the discharger rather than the government.

When contracting a spill cleanup company it is important to ensure they are in compliance with OSHA regulations for the training of workers involved with the cleanup of hazardous materials (which may include petroleum). For cooperatives, workers responding to a discharge also will have to have appropriate OSHA certification.

When considering the issue of “shortest feasible time” for spill response, a number of factors will enter into the review process. The volume of product, the proximity of surface waters, and natural resources at risk are some of the factors that will be considered in the review of the plan. The effectiveness of measures taken by the operator to contain the worst case spill affects the response required from a cleanup contractor. Consequently, it may be advantageous to set up a means at the facility to implement a maximum containment effort rather than go to extraordinary measures to have a contractor on site immediately.

If the facility chooses to emphasize initial containment, the plan must ensure that all materials and equipment are readily available and facility personnel involved in the containment operations have the appropriate training.

- 11. Assessment of the worst case discharge including measures to limit the outflow of oil, response strategy, and operational plan. For the purpose of this regulation, the worst case discharge is the instantaneous release of the volume of the largest tank on the facility (125% of the volume of the largest tank with multiple tanks within a single containment dike) during adverse weather conditions. Facilities shall take into consideration that due to hydraulic pressure of the release, the secondary containment will not contain this volume in its entirety. The worst case discharge for a pipeline shall be based upon the volume of a discharge calculated using the maximum pressure, velocity, elevation, largest pipe size, and pipeline location. The Board will consider submission of other worst case scenarios on a facility specific basis.**

The primary purpose of this part of the plan is to explain the measures that will be taken to control the flow of oil involved in the worst case spill. The basic strategy for spill management is to keep as much of the product as possible from reaching the water, reduce the impact to natural resources, and implement an effective cleanup as soon as possible.

Historical data indicate that in the event of a catastrophic release of oil from an AST the product will escape the secondary containment due to the wave-like action of the product when the tank fails. Just how much product actually spills over the dike depends on the volume of the tank, type of product, and construction of secondary containment, among other things. In documented cases of tank failure, between 17% and 28% of the volume of the tank actually escaped over the dike wall. In order to forgo the need for site specific engineering studies, the Agency will accept

a “slosh” volume of 22% of the capacity of the largest tank as the “worst case discharge”. This volume of product is the amount that should be used in planning the response strategy.

Please note that “125% of the volume” refers only to calculating the baseline volume equivalent to the largest tank at the facility when the largest tank is one of several within a single diked area. The reasoning is that in the worst case scenario when the largest tank fails, the force of the product release has the potential to damage transfer piping and other tanks within the dike. This would therefore increase the size of the spill significantly. So, in determining the worst case spill for a multi-tank containment area the following should be used:

$(\text{Vol. of the largest tank} \times 1.25) \times .22$  (the “slosh factor”) = worst case discharge

For onshore facilities, adverse weather conditions mean ten-year, 24-hour rain event which translates into approximately six inches of rainfall.

**12. Inventory of facility containment equipment including specification of quantity, type, location, time limits for gaining access to the equipment, and identification of facility personnel trained in its use.**

In order to conduct initial containment the facility’s equipment inventory must be significant to deal with the volume and type of products at the facility. The equipment and materials must be onsite and readily accessible for deployment to limit the outflow of oil according to the response strategy. The positions of the facility response personnel, rather than the individuals’ names, should be listed. The statute requires that the operator respond to a discharge “in the shortest feasible time” and the stated response time for a cleanup contractor will be balanced with the response capabilities of the facility.

**13. (a) In addition to the abovementioned requirements set forth in this subsection, the operator of a facility with an aggregate aboveground storage or handling capacity greater than 1,000,000 gallons of oil shall conduct a groundwater characterization study within the geographic boundaries of the facility to be submitted as part of the contingency plan. The operator of such a facility shall utilize upgradient and downgradient monitoring wells to satisfy this requirement. At the time of a discharge, the operator of such a facility shall conduct further characterization of the groundwater as required by the Board.**

The objective of the groundwater characterization is to establish an inventory of groundwater characteristics at the facility and baseline water quality data for assessment of possible contamination of petroleum. In the event of a discharge, additional studies and possible groundwater remediation will be required. Sections of Volume V contain detailed GCS guidelines.

**(b). For the purpose of satisfying the requirement to identify and locate natural resources at risk set forth in this subsection, the operator of a pipeline shall identify surface waters as indicated on the applicable USGS quadrangle maps, public water supplies, State or Federal wildlife management areas, wildlife refuges, management areas, sanctuaries, property listed on the National Register of Historic Places, and property listed on the National Register of Natural Landmarks which could be**



**reasonably be expected to be impacted by the discharge. At the time of a discharge the operator of a pipeline shall conduct a complete groundwater characterization study as required by the Board and identify other natural resources at risk including public and private wells or springs which could reasonably be expected to be impacted by the discharge.**

Because of the extensive nature of the pipelines, natural resource information should be listed by county in addition to the reference locations on the maps submitted.

- 14. Identification and location of any municipal services (water, sewage), at risk, notification procedures applicable, and means of protection of these services. The identification and location of all municipal services shall include those services for which official records are available. The operator of a pipeline shall determine which sections of the system are located in areas that would require an immediate response by the operator to prevent hazards to the public if a discharge occurred.**

The information concerning the location of municipal services is available from the city, town or county where the facility is located. In the event of a catastrophic discharge oil may flow across pavement or a parking lot and enter sanitary sewer manholes or stormwater drainage systems. The potential for explosion can be very high, especially when the spilled product is gasoline. It is also important to locate any public drinking water intakes downstream of the facility that could be impacted by a petroleum discharge. Water wells used for a public water supply in the vicinity of the facility also should be located. A major petroleum release to a wastewater treatment plant or to a water supply system can cause enormous damage and be extremely disruptive to a community. Virginia law holds the discharger of oil liable for damages to public and private property that occur as a result of the spill.

- 15. If applicable, this plan shall include the facility's responsibility for responding to a discharge from a vessel moored at the facility and shall identify the sizes, types, and number of vessels that the facility can transfer oil to or from simultaneously.**

It is important to delineate the level of responsibility when the plan is submitted and incorporate the response strategy in the event of a discharge.

- 16. A description of training, equipment testing, and periodic unannounced oil discharge drills conducted by the operator to mitigate or prevent the discharge, or the substantial threat of a discharge.**

Spill prevention training, shutdown measures, testing schedules for facility equipment, and plans for spill drills should be outlined in the plan.

Although regular safety meetings disseminate valuable information to company personnel, unannounced drills maintain a state of readiness for emergency response.

- 17. The facility's oil inventory control procedures. Facilities shall ensure that this control procedure is capable of providing for the detection of a discharge of oil within the shortest feasible time in accordance with recognized engineering practices and industry measurement standards.**

For smaller facilities inventory reconciliation such as measurements of incoming and outgoing product records is an appropriate inventory control. At large facilities measurements of product level and other means need to be specified in the plan.

- 18. Establishment of a system for early detection of a discharge to groundwater, utilizing upgradient and downgradient monitoring wells, or other groundwater protection measures acceptable to the Board. Operators subject to GCS requirements may utilize such wells to meet this requirement.**

The purpose of this requirement is to ensure that any release, especially one that may not be readily observable, will be detected before there is major damage to groundwater. The installation of groundwater monitoring wells may be the most cost-effective means of accomplishing this, although some technologies currently being used in leak detection of UST systems may be effective in some circumstances.

- 19. The procedures to be followed, upon detection of a discharge of oil, for testing and inspection of all tanks, piping and all oil transfer associated equipment that could reasonably be expected to be a point source for the discharge. These procedures shall be conducted within the shortest feasible time and in accordance with recognized engineering practices.**

Specific testing procedures that are in accordance with recognized industry standards, such as those from API, will be acceptable for the ODCP Plan. If hydro-testing is used, the facility plan must account for the disposal of the contaminated water used as the testing medium.

- 20. The facility's preventive maintenance procedures applicable to the critical equipment of an oil storage and transfer system as well as the maximum pressure for each oil transfer system. The term "critical equipment" shall mean equipment that affects the safe operation of an oil storage and handling system.**

The reason for having these measures required as part of the ODC Plan is that testing and inspection of equipment and systems may be neglected. The failure to observe good maintenance practices is the cause of many oil spills. The state is placing a strong emphasis on prevention of oil pollution from the storage facility and new state regulation reflects this policy. State regulations include formal testing for inventory control measures, shutdown and overfill prevention procedures, and integrity testing of tanks and piping.

- 21. A description of the security procedures used by facility personnel to avoid intentional or unintentional damage to the facility.**

- 22. A post discharge review procedure to assess the discharge response in its entirety.**

Much can be learned from a "de-briefing" session following an oil discharge, whether it is a major or minor incident. The review of the response to even minor spills is an excellent way to "de-bug" problems. In the event of a major discharge, the entire ODC Plan will be extensively reviewed to determine its effectiveness.

## **Appendix E**

### **ODCP SUBMITTAL**

#### **Compliance Dates**

9 VAC 25-91-40 D requires operators to submit a complete ODCP application meeting all regulatory requirements no later than 90 days prior to commencement of operations. CODE ' 62.1-44.34:15 requires the operator to receive ODCP approval before commencing operations.

Applications that include fees should be sent to:

Department of Environmental Quality

Office of Financial Management

P.O. Box 10150

Richmond, VA 23240

Applications that do not include fees should be sent to the appropriate Regional Office.

A single copy of the plan is received in central office, logged in and assigned a facility ID number. All fees are processed by OSRR staff and forwarded to Office of Financial Management. The original application form is retained in central office and a copy is sent with the plan to the regional office.

ODCP facility ID numbers are issued by central office when an ODCP application package is received. ODCP facility numbers may be issued upon regional request prior to submittal for compliance tracking. If facilities subject to the ODCP requirements subsequently close tanks which brings petroleum storage capacity below 25,000 gallons, the procedures for ODCP Revocation/Recission in Appendix G apply.

Regional staff sends notification of an incomplete ODCP package submittal to the operator. The following form letters may be used for incomplete submittals.

The following form letters are referenced for incomplete submittals:

No Application

No Fee

Insufficient Fee

No Application and No Fee

Insufficient Fee and No Application

No Plan

(No application)

(Date)

Operator Name  
Company  
Operator Address

Subject: Incomplete Oil Discharge Contingency Plan Submittal

Dear M\_ \_\_\_\_\_:

We have received the Oil Discharge Contingency Plan for the \_\_\_\_\_ facility located in \_\_\_\_\_. However, no application was enclosed with the plan. In order for the plan to be reviewed in its entirety, it will be necessary for you to submit a completed and notarized application form according to Virginia Regulation 9 VAC 25-91-170 B.

Please submit the completed form by \_\_\_\_\_ to:

Virginia Department of Environmental Quality  
[insert appropriate Regional Office address and contact]

A copy of the application form is enclosed and if you have any questions, contact \_\_\_\_\_ at \_\_\_\_\_.

Sincerely,

\_\_\_\_\_

ODCP Reviewer

(No fee)

(Date)

Operator Name  
Company  
Operator Address

Subject: Oil Discharge Contingency Plan Fee Submittal

Dear M\_ \_\_\_\_\_:

We have received the Oil Discharge Contingency Plan for the \_\_\_\_\_ facility located in \_\_\_\_\_. However, our records show that no fee was enclosed with the plan. In order for review of the plan to proceed, it will be necessary for you to submit the correct fee amount as required by Virginia Regulation 9 VAC 25-91-60.

Based on the volume of \_\_\_\_\_ gallons of petroleum storage reported on the application form, the fee due for this size facility is \$\_\_\_\_\_. The check, draft or postal money order should be made payable to Treasurer, Commonwealth of Virginia sent to the following by \_\_\_\_\_.

Virginia Department of Environmental Quality  
Office of Financial Management  
P.O. Box 10150

Richmond, VA 23240

In order for your fee to be processed promptly we request that you attach to the check a photocopy of this letter or a cover letter in reference to the "Oil Discharge Contingency Plan Program" and the facility identification number \_\_\_\_\_.

If you have any questions please contact \_\_\_\_\_ at \_\_\_\_\_.

Sincerely,

\_\_\_\_\_

ODCP Reviewer

(Insufficient fee)

(Date)

Operator Name  
Company  
Operator Address

Subject: Oil Discharge Contingency Plan Fee Submittal

Dear M\_ \_\_\_\_\_:

We have received the Oil Discharge Contingency Plan for the \_\_\_\_\_ facility located in \_\_\_\_\_. However, our records show that the fee amount of \$\_\_\_\_\_ which was submitted with the plan is insufficient as required by Virginia Regulation 9 VAC 25-91-60.

Based on the volume of \_\_\_\_\_ gallons of petroleum storage reported on the application form, the fee due for this size facility is \$\_\_\_\_\_. The check, draft or postal money order for the difference (\$\_\_\_\_\_) should be made payable to Treasurer, Commonwealth of Virginia and sent to the following by \_\_\_\_\_.

Department of Environmental Quality  
Office of Financial Management  
P.O. Box 10150  
Richmond, VA 23240

In order for your fee to be processed promptly we request that you attach to the check a photocopy of this letter or a cover letter in reference to the "Oil Discharge Contingency Plan Program" and the facility identification number \_\_\_\_\_.

If you have any questions please contact \_\_\_\_\_ at \_\_\_\_\_.

Sincerely,

\_\_\_\_\_

Regional Reviewer

(No fee and no application)

(Date)

Operator Name  
Company  
Operator Address

Subject: Incomplete Oil Discharge Contingency Plan Submittal

Dear M\_ \_\_\_\_\_:

We have received the Oil Discharge Contingency Plan for the \_\_\_\_\_ facility located in \_\_\_\_\_. However, no application was enclosed with the plan. In order for the plan to be reviewed in its entirety, it will be necessary for you to submit a completed and notarized application form according to Regulation 9 VAC 25-90-50 C. A copy of the application form is enclosed.

In addition, our records show that no fee was enclosed with the plan. Based on the volume of \_\_\_\_\_ gallons of petroleum storage reported in the plan, the fee due for this size facility is \$\_\_\_\_\_ as required by Virginia Regulation 9 VAC 25-91-60. The check, draft or postal money order should be made payable to Treasurer, Commonwealth of Virginia.

In order for the plan review to proceed, the application and the fee should be sent to the following by \_\_\_\_\_.

Department of Environmental Quality  
Office of Financial Management  
P.O. Box 10150  
Richmond, VA 23240

In order for your fee to be processed promptly we request that you attach to the check a photocopy of this letter or a cover letter in reference to the "Oil Discharge Contingency Plan Program" and the facility identification number \_\_\_\_\_.

If you have any questions, please contact \_\_\_\_\_ at \_\_\_\_\_.

Sincerely,

\_\_\_\_\_

ODCP Reviewer

(No application and insufficient fee)

(Date)

Operator Name

Company

Operator Address

Subject: Incomplete Oil Discharge Contingency Plan Submittal

Dear M\_ \_\_\_\_\_:

We have received the Oil Discharge Contingency Plan for the \_\_\_\_\_ facility located in \_\_\_\_\_. However, no application was enclosed with the plan. In order for the plan to be reviewed in its entirety, it will be necessary for you to submit a completed and notarized application form according to Regulation 9 VAC 25-90-50 C. A copy of the application form is enclosed.

In addition, our records show that the fee amount of \$\_\_\_\_\_ which was submitted with the plan is insufficient as required by Virginia Regulation 9 VAC 25-91-60. Based on the volume of \_\_\_\_\_ gallons of petroleum storage reported in the plan, the fee due for this size facility is \$\_\_\_\_\_ as required by Virginia Regulation 9 VAC 25-91-60. The check, draft or postal money order for the difference (\$\_\_\_\_\_) should be made payable to Treasurer, Commonwealth of Virginia.

In order for the plan review to proceed, the application and the fee amount listed above should be sent to the following by \_\_\_\_\_.

Department of Environmental Quality

Office of Financial Management

P.O. Box 10150

Richmond, VA 23240

We also request that for the fee to be processed promptly that you attach to the check a photocopy of this letter or a cover letter in reference to the "Oil Discharge Contingency Plan Program" and the facility identification number \_\_\_\_\_.

If you have any questions, please contact \_\_\_\_\_ at \_\_\_\_\_.

Sincerely,

\_\_\_\_\_

ODCP Reviewer



(No plan)

(Date)

Operator Name  
Company  
Operator Address

Subject: Incomplete Oil Discharge Contingency Plan Submittal

Dear M\_ \_\_\_\_\_:

We have received an application and fee amount of \$ \_\_\_\_\_ for the Oil Discharge Contingency Plan program for the \_\_\_\_\_ facility located in \_\_\_\_\_. However, our records show that no plan was received with the application and fee.

In order for the review process to proceed, the plan must be sent to the following by \_\_\_\_\_.

Virginia Department of Environmental Quality  
[insert appropriate Regional Office address and contact]

Be advised that until an Oil Discharge Contingency Plan is actually received by the Department, as operator of the above mentioned facility, you cannot be considered in compliance with Virginia Regulation 9 VAC 25-90-10 et seq., Oil Discharge Contingency Plans and Administrative Fees for Approval. For your reference enclosed are copies of the regulation and Guidelines for the Preparation of the Oil Discharge Contingency Plan.

We also request that you include with the plan a photocopy of this letter or a cover letter in reference to the "Oil Discharge Contingency Plan Program" and the facility identification number \_\_\_\_\_.

If you have any questions, please contact \_\_\_\_\_ at \_\_\_\_\_.

Sincerely,

\_\_\_\_\_

ODCP Reviewer



## **Appendix F**

### **INFORMAL FACT FINDING CONFERENCES**

#### **I. General Information**

ODCP applicants will be given one opportunity to contest denial or modification decisions. Pursuant to the requirements of Virginia Code ' 9-6.14:11, the Department of Environmental Quality (ADEQ@or the AAgency") will:

1. Provide applicants the opportunity for an in-person consultation-conference (hereinafter referred to as the "meeting") with Agency staff for the consideration of ODCP denial or modification decisions;
2. Provide applicants reasonable notice of the meeting procedures and the time, date and place where the meeting will be held;
3. Permit applicants to have (a) representative(s) attend the meeting and allow applicants and/or their representative(s) to present facts, data, arguments and any other proof in connection with the ODCP application;
4. Inform applicants of any information in the Agency's possession that may be used to make an adverse decision;
5. Provide the applicant with a prompt, written decision specifying the reasons the approval will be modified or denied.

#### **II. Initiation of Meeting**

Applicants will be notified in writing that they may contest an ODCP modification or denial decision. The written notice the Agency sends to the applicant will (1) inform applicants that they may meet with Agency staff; (2) inform applicants that they will be permitted to have (a) representative(s) attend the meeting; (3) inform applicants that they and/or their representative(s) may present facts, data, arguments and any other proof in connection with their application; (4) inform applicants that any meeting may be tape-recorded; (5) inform applicants that they may obtain a copy of their ODCP file; (6) require that applicants notify the agency in writing of their intention to contest the modification or denial decision; (7) require that applicants provide a written summary of the issues they intend to contest; and (8) inform applicants of filing deadlines.

#### **III. Meeting**

All persons attending the meeting will note their presence by signing an attendance form. An Agency employee to whom the Director has delegated the authority to approve ODCPs will preside over the meeting. Agency staff or their designees will briefly present the basis for the proposed modification or denial. The applicant and/or the applicant's representative(s) then will present any information or argument. Agency staff or their designees, the applicant and/or the applicant's representative(s) and the presiding officer will then present any follow-up questions. All documents presented during the meeting will be marked and numbered.

The applicant may submit follow up information after the reconsideration meeting if permitted by the presiding officer, in his or her sole discretion.

If no follow up information is to be submitted, the presiding officer will proceed to render a written decision. If additional information is to be submitted, the decision will follow review of that information. If information is not submitted timely, the presiding officer will not consider the information in rendering its decision. In the written decision, the presiding officer will inform the applicant of the reason for denial or modification of ODCP approval and provide the notice required by Supreme Court Rule 2A:2. The presiding officer's decision will be sent to the applicant by certified mail.

#### IV. Deadlines

Where an applicant has elected to attend a meeting, the Agency may establish reasonable deadlines by which the applicant must schedule the meeting. The presiding officer will seek to render the decision within 90 days of the date of the meeting or alternatively, the date he or she receives additional information submitted by the applicant after the meeting.

## **Appendix G**

### **ODCP REVOCATION**

According to 9 VAC 25-91-170 I an ODCP approval may be revoked, if after notice and opportunity for a hearing, it is determined that:

1. Approval was obtained by fraud or misrepresentation;
2. The plan cannot be implemented as approved;
3. A term or condition of approval or of this regulation has been violated; or
4. The facility is no longer in operation.

Revocation in any of the circumstances listed in items 1 through 3 above would occur through an enforcement action. However, if a facility is no longer in operation, i.e., ceases to store or handle oil, a non-adversarial revocation may be undertaken. For the purposes of program implementation, a facility is considered no longer in "operation" if it is no longer subject to this regulation due to a reduction of aboveground aggregate oil storage or handling capacity below 25,000 gallons.

In the instance of a non-adversarial revocation the facility operator initiates a request, preferably in writing, for ODCP approval revocation. Although it is generally presumed that it would be in the operator's interest to have ODCP approval revoked if the facility ceases operations or is no longer subject to the requirements, the request is made at the operator's discretion. For example, an operator may choose to close all or some of the facility tanks while retaining the approved ODCP for future oil storage or handling operations.

ODCP approval revocation involves procedures that verify cessation of oil storage operations or reduction of aboveground aggregate capacity, and document facility conditions to ensure that the ODCP has been implemented in the event of an oil discharge. The facility operator subsequently receives a letter from the regional staff (see attachments that follow) stating the ODCP approval has been revoked and listing the circumstances that would subject the facility again to ODCP requirements. Investigations of discharge cleanup, site remediation or possible violations of terms or conditions of the ODCP or Article 11 are conducted independently of the ODCP approval revocation process.

### **TANK CLOSURE**

A facility's aboveground aggregate oil storage capacity is reduced for the purposes of ODCP approval revocation when tanks are permanently closed and documented according to AST registration requirements. This documentation also includes tanks no longer used to store oil, but still in service at the facility for storage of other commodities. Tanks brought back into service for oil storage after having been permanently closed must comply with performance standards of 9 VAC 25-91-10 et seq.

If tanks used to store non-oil commodities are brought back into service for oil storage, they would subsequently be counted toward facility aboveground aggregate capacity and the facility may again be subject to ODCP requirements.

## **ODCP APPLICATION RESCISSION**

If a facility operator requests the ODCP approval revocation because the facility ceased operations or is documented to be no longer subject to the requirements, and the ODCP is under review but not approved, the request becomes one for rescission of the ODCP application. Although the plan has not been approved, the facility is nonetheless subject to the ODCP requirements. The procedures for documentation of facility conditions and verification of aboveground aggregate storage capacity (i.e., ODCP Facility Revocation Inspection Form) are carried out for application rescission. It is not necessary for the operator to sign an ODCP Revocation Hearing Waiver for an ODCP application rescission.

## **REVOCATION INSPECTION**

Once the operator has made a request for ODCP approval revocation or application rescission, Central Office reviews all documentation of tank closure and advises the regional staff of the AST registration status. The regional staff visits the facility to:

1. Verify the facility aboveground aggregate capacity reduction;
2. Determine if the ODCP has been implemented for actual discharges and provide documentation of facility conditions;
3. Provide assistance to the operator and answer questions regarding oil spill response and remediation; and,
4. Obtain the operator's signature for ODCP Revocation Hearing Waiver, if applicable.

The regional staff to document facility conditions and aboveground aggregate storage capacity at the time of the ODCP approval revocation completes the ODCP Revocation Inspection Form (attached). If the facility has been inspected as part of ODCP review and approval within a year prior to the initiation of the revocation process, the facility visit and inspection may be waived at the discretion of the regional management. If a facility visit and inspection is not conducted as part of the revocation process, then a memorandum summarizing facility conditions as determined by previous inspections should be attached to the completed ODCP Revocation Inspection Form.

## **REVOCATION HEARING WAIVER**

If approval of an ODCP is to be revoked, the facility operator has the right to a hearing in accordance with the State Water Control Law, ' 62.1-44.34:15 (D), Code of Virginia and 9 VAC 25-

91-170 I. However, in the case of an operator-initiated revocation due to facility or tank closure, a formal hearing is not warranted and the operator should sign the ODCP Revocation Hearing Waiver (attached). The regional staff should prepare a copy of the waiver form and have it available for signature at the facility visit and inspection. If an inspection is not conducted, the form is sent to the operator with an explanation and a request for its return. If the operator has requested rescission of the ODCP application because the plan has not been approved, ODCP Revocation Hearing Waiver form is not applicable.

## **COMPLIANCE AND ENFORCEMENT**

Until an ODCP approval has been revoked, or the application rescinded, the operator is subject to the requirements for plan implementation in the event of an actual or threatened oil discharge. If, during the revocation inspection, it is determined a discharge has not been reported or cleaned up, the operator must take action to mitigate the discharge and proceed with cleanup. The regional office conducts cleanup direction and oversight, including site characterization and corrective action. Any compliance or enforcement action undertaken as a result of investigations for reporting or cleanup violations, failure to implement an ODCP, or operating without an ODCP, is done independent of the ODCP revocation process.

Aboveground aggregate storage capacity reduction may occur at a facility that is required to submit a plan but that has not complied with ODCP requirements. A facility inspection is conducted in this circumstance and the ODCP Revocation Inspection Form completed. Regardless of facility conditions or status of potential cleanup, a facility operating without an ODCP is referred to the Office of Enforcement for possible action. The referral should include a copy of the ODCP Revocation Inspection Form and a memorandum summarizing any previous notification of regulatory requirements and the operator's response.

## **FILE DOCUMENTATION**

Files for facilities that have had ODCP approval revoked or application rescinded are maintained and the ID numbers remain in the database.

The inspection form, documentation letter to operator and the Hearing Waiver Form (if applicable) should be maintained in the appropriate Regional Office file.

The following forms and letters are used during the ODCP revocation process:

- ODCP having received Formal Approval
- ODCP under review
- ODCP Facility Revocation Inspection Form
- ODCP Revocation Hearing Waiver Form

(Revocation of Formally Approved ODCP)

*Operator Name*

*Facility Name*

*Facility Address*

Re: OIL DISCHARGE CONTINGENCY PLAN (ODCP) REVOCATION

Facility ID \_\_\_\_\_

Dear \_\_\_\_\_:

This letter serves as revocation of the approval of the Oil Discharge Contingency Plan for the following facility:

*Company/Facility Name, Facility Location*

This revocation is in response to registration documentation for aboveground tanks located at the above-referenced facility. If the total aggregate aboveground storage capacity at this facility increases to more than 25,000 gallons of oil, the submittal of a new ODCP, application, and respective fee is required as a condition of operation.

If you have any questions concerning the ODCP program, please contact (*regional ODCP/AST planner*) at (*regional telephone number*).

Sincerely,

Regional Director

cc: OSRR



(Rescission of ODCP Application)

*Operator Name*

*Facility Name*

*Facility Address*

Re: OIL DISCHARGE CONTINGENCY PLAN (ODCP) APPLICATION RESCISSION

Facility ID No. \_\_\_\_\_

Dear \_\_\_\_\_:

This letter serves as rescission of the application for approval of the Oil Discharge Contingency Plan for the following facility:

*Company/Facility Name, Facility Location*

This rescission is in response to registration documentation for aboveground tanks located at the above-referenced facility. If the total aggregate aboveground storage capacity at this facility increases to more than 25,000 gallons of oil, the submittal of a new ODCP, application, and respective fee is required as a condition of operation.

If you have any questions concerning the ODCP program, please contact (*regional ODCP/AST planner*) at (*regional telephone number*).

Sincerely,

Regional Program Manager

cc: OSRR

## ODCP REVOCATION HEARING WAIVER FORM

OWNER/OPERATOR: (Name) \_\_\_\_\_  
(Company Name) \_\_\_\_\_  
(Address) \_\_\_\_\_  
\_\_\_\_\_

I hereby agree to the revocation of the Oil Discharge Contingency Plan, Facility No. \_\_\_\_\_ and waive my right to a hearing in accordance with the State Water Control Law, ' 62.1-44.34:15(D) of the Code of Virginia and in accordance with 9 VAC 25-991-170. This revocation is made because the facility *(has been closed/no longer has sufficient aboveground storage capacity to require an ODCP)*. I sign this agreement with the understanding that should the total aggregate capacity at this facility increase to more than 25,000 gallons of oil, the submittal of a new ODCP, application, and respective fee is required as a condition of operation.

SIGNED: \_\_\_\_\_

TITLE: \_\_\_\_\_

DATE: \_\_\_\_\_

## **APPENDIX H**

### **GROUNDWATER CHARACTERIZATION STUDY REPORT FORMAT**

#### **I. Surface/Subsurface Site Characterization**

- 1.0 Facility Base Map(s)
- 2.0 Public and Private Water Well Map (including references)
- 3.0 Site Topography Map
- 4.0 Monitoring Well Location Map

#### **II. Groundwater Characteristics**

- 1.0 Regional Geology Summary
- 2.0 Site Geology Summary
  - 2.1 Boring Logs
  - 2.2 Cross Section
- 3.0 Monitoring Well Construction Summary
- 4.0 Abandonment of Boring Locations Summary (if any)
- 5.0 Monitoring Well Development Summary
- 6.0 Aquifer Characteristics Summary

#### **III. Soil and Groundwater Quality Evaluation**

- 1.0 Soil Sample Collection Summary
  - 1.1 Soil Gas Survey Summary and Table
- 2.0 Soil Analytical Sample Results Summary
  - 2.1 Table of Methods Used
  - 2.2 Table of Analytical Results
  - 2.3 Isoconcentration Map
- 3.0 Groundwater Level Measurements Table
- 4.0 Groundwater Analytical Sample Results Summary
  - 4.1 Table of Methods Used
  - 4.2 Table of Analytical Results
  - 4.3 Isoconcentration Map

Appendix A. Soil Analytical Data including Chain-of-Custody

Appendix B. Groundwater Analytical Data including Chain-of-Custody

Appendix C. Quality Assurance Project Plan

A groundwater monitoring report consists of three parts: monthly gauging data of groundwater monitoring wells, quarterly groundwater and vapor monitoring and an annual analytical groundwater quality evaluation. A comprehensive groundwater monitoring report must be submitted annually. The annual groundwater monitoring report must be submitted to DEQ by July 1, each year. This report must be submitted in the reporting format outlined in Appendix J. A detailed explanation of the pollution prevention monitoring report contents and reporting format is discussed in Volume V.



## Appendix I

**Acceptable Analytical Methods for Use at Petroleum Contaminated Sites**

Parameter	Analytical Methods	<sup>1</sup> Medium Soil	<sup>1</sup> Medium Water	"M" Code from the 198 UCR Table
BTEX	EPA 503.1 EPA 524.1 EPA 602 EPA 624 SW-846 8021B SW-846 8260B	    s s	w w w w w w	   M0108 M0116 M1361 M1379
TPH Gasoline and JP-4	California LUFT Method Wisconsin DNR - GRO SW 846 8015b (modified TPH - GRO)	s s s	w w w	M0100, M0121 M1000, M1014 M1365, 1367
TPH Diesel, Fuel Oil #1 and #2, Jet Fuel <sup>3</sup> , Kerosene	California LUFT Method Wisconsin DNR - DRO SW 846 8015b (modified TPH - DRO)	s s s	w w w	M0101, M0122 M1001, M1015 M1366, M1368
TPH Crude Oil, Fuel Oil #4, #5, and #6, Used Oil, Hydraulic Oil	EPA 413.1 EPA 413.2 EPA 418.1 Wisconsin TRPH EPA 1664 <sup>2</sup>	 s s s	w  w w w	M1008  M0123
PAHs/PNAs	EPA 525 EPA 610 EPA 625 SW-846 8100 SW-846 8270C SW-846 8310	   s s s	w w w w w w	 M0110 M0117 M0143 M0149
MTBE	EPA 602 (modified) SW-846 8021B SW-846 8021B	  s	w w	M1010 M1371 M1372
Lead	SW-846 7420/7421	s		M1012

<sup>1</sup> Applicable medium refers to the sample matrix that may be analyzed by the subject test method.

"w" refers to an analytical method that may be used to analyze water

"s" refers to an analytical method that may be used to analyze soil

<sup>2</sup> On May 14, 1999, EPA approved Method 1664 as part of EPA's effort to reduce the use of CFCs and meet the CFC phaseout agreed to in the Montreal Protocol. DEQ Case Managers should be aware of the following limitations of Method 1664 when considering its applicability to a given site:

1. Method 1664 is not applicable to the measurement of materials that volatilize at temperatures below approximately 85 degrees C.
2. Some crude oils and residual fuel oils contain significant percentages of materials that are not soluble in hexane. Accordingly, recoveries of these materials may be low.
3. The detection limit for Method 1664 is in the order of 5 mg/l.

<sup>3</sup> JP-4 is a wide-cut fuel made by blending gasoline and kerosene fractions in a 65 to 35 ratio.

**NOTE: Many of the methods listed above for BTEX also may be used for MTBE**

### References:

EPA 100-400 Series – Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983

EPA 500 Series – Methods for the Determination of Organic Compounds in Drinking Water, EPA-600/4-88/039, December 1988.

EPA 600 Series – 40 CFR, Part 136, 1992.

EPA SW-846 – Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846). Revision 5, April 1998

Publ. – SW - 140. Modified GRO, Method for Determining Gasoline Range Organics, Wisconsin DNR, September 1995.

Publ. – SW – 141. Modified DRO, Method for Determining Diesel Range Organics, Wisconsin DNR, September 1995.

Publ. – SW – 143. Wisconsin DNR, 1992



## **APPENDIX J**

### **ANNUAL AST GROUNDWATER MONITORING REPORT FORMAT**

- I. Surface/Subsurface Site Characterization
  - 1.0 Summary of measurement procedures
  - 2.0 Table of static water levels recorded from monitoring wells
- II. Quarterly Groundwater and Vapor Monitoring
  - 1.0 Summary of groundwater and vapor collection procedures
  - 2.0 Table of vapor measurements from monitoring-well headspace
  - 3.0 Table of groundwater monitoring well visual inspection results
- III. Annual Groundwater Quality Evaluation
  - 1.0 Summary of groundwater collection methods
  - 2.0 Summary of groundwater analytical results and interpretation
  - 3.0 Table of analytical methods used
  - 4.0 Table of analytical results
  - 5.0 Table of field and trip blank results

Appendix A – Groundwater Laboratory Data including Chain-of-Custody forms

Appendix B – Laboratory Quality Assurance Review

*Concurrent Monitoring* – An AST facility undergoing corrective-action monitoring for oil constituents in response to a release may use the GCS monitoring wells required under 9 VAC 25-91-190. However, these GCS wells can be used only when they are located in the impacted area and the tanks and associated transfer piping have been tested for leaks and found not to be leaking. The DEQ-Water Division or another agency must require the corrective action monitoring. GCS well monitoring can be accomplished via monitoring associated with the corrective-action requirements or remediation investigation. Results of tank testing and groundwater monitoring currently conducted at the facility must be sent to the appropriate DEQ Regional Office, AST Program. This documentation should include the name and address of the facility, facility contact person, DEQ department or agency name requiring groundwater monitoring, a contact individual, identification of monitoring wells located in the impacted area, and analytical method performed. The monitoring required by 9 VAC 25-91-190 for GCS monitoring wells used in a corrective action or remediation investigation resumes when corrective action monitoring or other monitoring programs conclude.





**Appendix K**

**LEAK DETECTION NOTIFICATION FORM**



# NOTIFICATION FOR ABOVEGROUND STORAGE TANK LEAK DETECTION

Facility ID No. \_\_\_\_\_

Page \_\_\_\_ of \_\_\_\_

Tank No.	Tank No. _____ —		Tank No. _____ —		Tank No. _____ —		Tank No. _____ —		Tank No. _____ —	
Release Detection Method:	Tank	Pipe	Tank	Pipe	Tank	Pipe	Tank	Pipe	Tank	Pipe
Groundwater Monitoring										
Vapor Monitoring										
Interstitial monitoring (briefly describe system type including RPB type)										
Visual Monitoring for Elevated ASTs										
SIR										

I certify the information concerning installation that is provided is true to the best of my belief and knowledge.

Installer Name \_\_\_\_\_  
Date \_\_\_\_\_

Signature \_\_\_\_\_

Installer Position \_\_\_\_\_  
Company \_\_\_\_\_

Operator Name \_\_\_\_\_  
Operator Address \_\_\_\_\_  
(if other than facility)  
\_\_\_\_\_

Facility Name \_\_\_\_\_  
Facility Address \_\_\_\_\_  
\_\_\_\_\_

Facility ID No. \_\_\_\_\_  
 Page \_\_\_\_ of \_\_\_\_

Tank No.	Tank No. _____		Tank No. _____		Tank No. _____		Tank No. _____		Tank No. _____		Tank No. _____		Tank No. _____	
Release Detection Method:  Groundwater Monitoring  Vapor Monitoring  Interstitial monitoring (briefly describe system type including RPB type)  Visual Monitoring for Elevated ASTs  SIR	Tank	Pipe	Tank	Pipe	Tank	Pipe	Tank	Pipe	Tank	Pipe	Tank	Pipe	Tank	Pipe

(Please attach this additional sheet as needed.)

## APPENDIX L

### Leak-detection Method Considerations

Detection Options	Site-Specific Factors	Tank-, Piping- and Oil-Related Factors
Groundwater Monitoring	Depth to groundwater must be less than 20 ft.; soil should consist of gravel, sand or silt; if soil contains clay, then more monitoring wells may be required depending on the hydraulic conductivity. A preliminary site assessment is necessary to determine groundwater flow gradient, fluctuation, and hydraulic conductivity.	Stored oil must be able to float on water, not mix easily with water and have a specific gravity of less than one. Monitoring wells must be checked monthly for oil.
Vapor Monitoring	Use at sites where soil is sufficiently porous to allow diffusion of vapors or soluble, traceable compounds and where background soil vapor levels do not interfere with monitoring equipment. A preliminary site assessment is necessary to determine oil volatility, soil permeability, soil wetness, and methane concentrations.	Oil must evaporate easily or a soluble, traceable compound that evaporates easily must be added to the tank on a continuous basis. Lower volatility oils delay and may prevent detection. Effective for gasoline. Response to other oils should be verified. For less volatile oil, use aspirated sensors, additional monitoring wells, larger diameter wells, and set lower alarm levels. Monitoring wells must be checked monthly for vapors or a traceable compound.
Interstitial Monitoring with RPB	None	Components of interstitial monitoring are an interstitial space located between the tank bottom and an RPB so a monitoring device can be installed. The monitoring system must detect a discharge from the inner wall into the interstitial space. Visual interstitial monitoring can be used if a leak is channeled or contained by the RPB and is visible for detection.
Visual Monitoring	None	Tanks/piping must be above the ground surface so the tank bottom/piping can be visually inspected. In addition, Visual Monitoring can be used if the oil stored is asphalt cement.
SIR	None	Third party certified SIR Provider is required. Must be in Pilot Program.



## **APPENDIX M**

### **AST Statistical Inventory Reconciliation (SIR) Checklist**

**SIR can provide an alternative method for leak detection of AST tanks and piping. Key components of a qualifying SIR program include: an SIR Provider certified by a qualified independent third party; a facility-specific SIR protocol developed by the SIR Provider to meet Virginia's regulatory standards; DEQ's approval of a facility ODCP that includes evidence of all of the above; and a facility operator and staff who understand and follow the facility-specific SIR protocol faithfully.**

#### **SIR PROTOCOLS AND CERTIFICATIONS ARE INCLUDED AS PART OF THE FACILITY ODCP REVIEW AND MUST BE APPROVED BY DEQ.**

- The facility operator must use an SIR Provider who has obtained independent third-party certification of its statistical analytical methods. Virginia has adopted EPA's "Results of U.S. EPA Standard Evaluation" for leak detection of USTs as the standard format for documenting such third-party certification.
- As part of the facility ODCP to be approved by DEQ, the facility operator must submit: 1) a copy of the third-party certification of the SIR Provider's analytical method; 2) a copy of the SIR implementation protocol developed by the SIR Provider for that particular facility; and 3) a copy of the SIR Provider's performance certification that the facility-specific implementation protocol and the statistical analytical method combine to meet Virginia's regulatory requirements for leak detection.
- Changing SIR providers or protocols, or changing to another method of leak detection requires resubmittal of the facility ODCP indicating this change to DEQ.

#### **INVENTORY DATA COLLECTION IS PERFORMED AND RECORDED DAILY BY THE FACILITY OPERATOR ACCORDING TO SIR PROVIDER SPECIFICATIONS.**

- Inventory data gathering and record keeping must be performed daily by the facility operator, exactly in accordance with the SIR Provider's facility-specific implementation protocol. This requirement applies to all provisions of the protocol including accurate meter calibration, accurate temperature correction, site operator training in SIR, etc.

#### **STATISTICAL ANALYSIS IS PERFORMED AND REPORTED MONTHLY BY THE SIR PROVIDER.**

- The SIR Provider must use the exact SIR methodology that was certified by the independent third party and must perform a review of inventory records through statistical analysis every month.
- SIR monthly analytical reports from the SIR Provider must meet DEQ guidelines for content and format which include for each AST: location ID, tank ID, tank capacity, MDL standard for the tank, product stored, loss trend with minimum detectable leak, meets monthly standard (Pass or Fail, if neither, it is Inconclusive), and remarks.

#### **APPROPRIATE RECORDS ARE MAINTAINED BY THE FACILITY OPERATOR, READILY AVAILABLE FOR INSPECTION.**

- Copies of the third-party certification for the SIR Provider's analytical method and the facility-specific SIR implementation protocol must be kept on file at the facility until DEQ is notified either that the facility has been closed or that the SIR protocol or provider has changed.
- The SIR Provider's performance certification must be kept on file at the facility until DEQ is notified either that the facility has been closed or that the SIR protocol or provider has changed.
- All inventory records and statistical analysis reports must be kept either on file at the facility, readily available for inspection for five years, or provided to DEQ along with the notification of facility closure.

**ANY SIR RESULT OF "FAIL," OR ANY TWO CONSECUTIVE SIR RESULTS OF "INCONCLUSIVE," CONSTITUTES A THREAT OF A DISCHARGE. THE FACILITY OPERATOR MUST REPORT ANY THREAT OF A DISCHARGE, AS WELL AS ANY ACTUAL DISCHARGE OF OIL IMMEDIATELY TO DEQ.**





# STORAGE TANK PROGRAM COMPLIANCE MANUAL

## VOLUME VI FINANCIAL RESPONSIBILITY

(October 12, 2001)



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### **Fact Sheet: Regulation for AST and Pipeline Facility Financial Responsibility Requirement**

#### **Regulation for AST and Pipeline Facility Financial Responsibility Requirement**



**FINANCIAL RESPONSIBILITY DEMONSTRATION REVIEW PROCEDURES**  
**for**  
**UNDERGROUND STORAGE TANKS**

## **1. Introduction**

Owners/operators of petroleum underground storage tanks (USTs) must certify that they have the financial resources available to pay for corrective action costs and third party lawsuits resulting from releases from regulated USTs. The amount of financial responsibility a UST owner/operator must demonstrate is based upon the number of gallons pumped through their USTs on an annual basis. The financial responsibility requirements are summarized in the Table 1 below.

<b>Table 1. UST Financial Responsibility Requirements</b>			
Annual Throughput (gallons)	Corrective Action (per occurrence)	Third Party Liability (per occurrence)	Annual Aggregate (per occurrence)
600,000 or less	\$5,000	\$15,000	\$20,000
600,000-1.2 million	\$10,000	\$30,000	\$40,000
1,200,001-1.8 million	\$20,000	\$60,000	\$80,000
1,800,001-2.4 million	\$30,000	\$120,000	\$150,000
Over 2.4 million	\$50,000	\$150,000	\$200,000

If the owner and operator of a petroleum UST are separate persons, only one person is required to demonstrate financial responsibility. Both parties, however, are liable in the event of noncompliance.

To demonstrate financial responsibility, owners/operators of USTs may choose any one or combination of allowable mechanisms. Allowable mechanisms include a financial test of self-insurance, guarantee, insurance or group self-insurance pool coverage, surety bond, letter of credit, and a trust fund. Refer to Section 5 of this Volume for a more complete discussion of each mechanism.

Also, owners/operators must maintain current evidence of financial responsibility on site where the USTs are located or at a corporate location, provided this location is within the Commonwealth of Virginia. Refer to Section 7 for a list of circumstances in which an owner/operator must submit information to the Virginia Department of Environmental Quality (Department).

## **2. Authority**

Sections 62.1-44.34:8 and 62.1-44.34:12 in the State Water Control Law (SWCL) of the Code of Virginia provides the statutory authority to require an owner/operator of a regulated petroleum UST to demonstrate financial assurance for corrective action and third party liability claims. The Virginia

Petroleum Underground Storage Tank Financial Responsibility Requirements Regulation, 9 VAC 25-590-10 *et seq.* (the Regulation) provides the regulatory authority for this requirement.

### 3. Definitions

The definitions in the SWCL, Articles 9 and 10, and the Regulation apply to these Procedures.

### 4. Exemptions

The Regulation excludes certain UST systems from the financial responsibility requirements. The following owners/operators of petroleum USTs are not required to demonstrate financial responsibility:

- State and federal facilities
- Owners/operators of tanks excluded from the UST technical standards (tanks storing fuel for use by emergency power generators are subject to the financial responsibility requirements)

### 5. Mechanisms to Demonstrate Financial Responsibility

Owners/operators of petroleum USTs may choose any one or combination of mechanisms to satisfy the financial responsibility requirements. Each mechanism requires specific documentation that certifies an owner/operator's eligibility to use that mechanism. In total, there are 12 appendices to the Regulation that correspond to the different financial assurance mechanisms. The number of appendices comprising a complete financial responsibility package will vary according to the specific mechanism an owner/operator has chosen. For example, an owner/operator using a trust agreement is required to complete three appendices while an owner/operator using a corporate guarantee must submit a total of five.

Each appendix required by a specific mechanism must be filled out ***completely*** and must be worded ***identically*** to the appendices in the Regulation. If an owner/operator is using a fill-in-the blank appendix, every blank must be filled in. (Note: Some appendices require additional attachments. For example, as part of the financial test of self-insurance, owners/operators may need to include financial statements to verify financial data provided in the letter).

In addition to the required appendices, owners/operators are required to maintain other types of documentation. **Regardless of which mechanism an owner/operator has chosen, every complete financial responsibility packet will include the following pieces of information:**

- **Certification of Financial Responsibility (Appendix IX)** - Every owner/operator demonstrating financial responsibility must complete a Certification of Financial Responsibility, regardless of the mechanism used to comply with the Regulation. The Certification of



Financial Responsibility must be the original, signed, and notarized document worded identically to the form shown in Appendix IX.

When completing the certificate, owners/operators must indicate the mechanism they are using to demonstrate financial responsibility. In most cases, two mechanisms will be selected: the Virginia Petroleum Underground Storage Tank Fund and the specific mechanism the owner/operator has chosen to use. In the form, the amount of coverage under the Virginia Petroleum Underground Storage Tank Fund is determined by subtracting the owner/operator's annual aggregate amount (see Table 1) from \$1 million. The effective period of coverage for the Certification of Financial Responsibility is one year from the date the certification is notarized.

- **Certification of Annual Gallonage** – Every owner/operator demonstrating financial responsibility must complete a Certification of Annual Gallonage, regardless of which mechanism they are using to comply with the Regulation. Gallonage information is used to verify the amount of financial assurance an owner/operator must demonstrate. The Certificate of Gallonage accounts for the annual petroleum flow-through of all regulated USTs owned/operated in the Commonwealth of Virginia, not only at individual site locations. While notarization is not required by regulation, the Department prefers that the Certification of Annual Gallonage be notarized.

An exception to this is provided for owner/operators demonstrating the maximum possible amounts for financial assurance. Owners/operators demonstrating the maximum amounts are *not* required to submit a Certification of Annual Gallonage.

A discussion of each mechanism and its unique requirements is included in the following subsections.

### **5.1 Financial Test of Self Insurance (9 VAC 25-590-60)**

Many owners/operators, based on their organization's financial strength, are able to demonstrate that they have the assets or funds available to cover the required financial responsibility amounts. In such cases, owners/operators may satisfy the financial responsibility requirements by passing a Financial Test of Self-Insurance, also known as a Letter of Self-Insurance or Letter from the Chief Financial Officer. A complete Financial Test of Self-Insurance package will contain the following materials:

**Appendix I or Appendix XI** – Owners/operators may choose either Appendix I or Appendix XI to satisfy this mechanism. In general, Appendix I is used by owners/operators of facilities required to demonstrate evidence of financial responsibility for any other EPA regulations or state programs authorized by EPA. Appendix XI is a shorter form and is used more commonly by smaller entities, such as service stations. The wording of the letter from the chief financial officer must be identical to the wording in the Regulation and must be signed by the owner/operator, Chief Financial Officer, or an authorized representative.

**Annual Financial Information** – Owners/operators completing Appendix I or Appendix XI must

verify the financial data provided as part of the Letter from the Chief Financial Officer (e.g., total tangible assets, total liabilities, and tangible net worth). To satisfy this requirement, owners/operators may either (1) submit a financial review statement from an independent Certified Public Accountant, (2) file their financial statements with an approved government regulatory agency, or (3) have an assigned financial strength rating from Dunn & Bradstreet. Each of these options is discussed further in Section 5.7.1.

**Appendix IX (Certification of Financial Responsibility)** - See instructions for completing this form at the beginning of this Section.

**Certification of Annual Gallonage** – See instructions for completing this form at the beginning of this Section.

## **5.2 Guarantee and Standby Trust Agreement (9 VAC 25-590-70 and 9 VAC 25-590-120)**

The guarantee allows a firm that is related to, or has a substantial business relationship with, an owner/operator of a regulated UST to assure adequate financial responsibility coverage on behalf of the owner/operator. A guarantor must be a parent of the owner/operator (i.e., a parent anywhere along the corporate chain), an affiliate of the applicant (i.e., the guarantor has the same parent corporation as the owner/operator), or a firm with a “substantial business relationship” with the owner/operator. A substantial business relationship is one of recent and ongoing business transactions that would make a guarantee contract under the laws of the Commonwealth valid. The Financial Responsibility Manager will evaluate each situation on a case-by-case basis.

Owners/operators using a guarantee must also establish a standby trust according to the Regulation. A complete financial responsibility package submitted by guarantors demonstrating on behalf of an owner/operator will include the following documents:

**Appendix I OR Appendix XI** - Owners/operators may choose either Appendix I or Appendix XI to satisfy this mechanism. For more information on this requirement, refer to the discussion in Subsection 5.1 (Financial Test of Self-Insurance).

**Annual Financial Information** – For more information on this requirement, refer to the discussion in Subsection 5.7.1 (Financial Data Verification). **Note:** An owner/operator may not use self-insurance in combination with the guarantee if the financial statements of the owner/operator and guarantor have been consolidated to meet the requirements of the financial test of this chapter.

**Appendix II (Guarantee)**– The wording of the guarantee must be identical to the wording in the Regulation and must be signed by the guarantor and notarized.

**Appendix VII (Trust Agreement)** – Owners/operators required to establish a standby trust fund (i.e.,

those demonstrating with a guarantee, surety bond, or letter of credit) must complete a Trust Agreement. The language of the agreement must be identical to the language of the Trust Agreement described in Appendix VII. Trust Agreements must be irrevocable and shall continue until terminated at the written direction of the grantor and the trustee, or by the trustee and the State Water Control Board.

**Appendix VIII (Certificate of Acknowledgement)** - Owners/operators required to establish a standby trust fund (i.e., those demonstrating with a guarantee, surety bond, or letter of credit) must complete a Certificate of Acknowledgement. The language of the certificate must be identical to the language of the certificate described in Appendix VIII of the Regulation. The Certificate of Acknowledgement must be notarized.

**Appendix IX (Certification of Financial Responsibility)** - See instructions for completing this form at the beginning of this Section.

**Certification of Annual Gallonage** – See instructions for completing this form at the beginning of this Section.

### **5.3 Letter of Credit and Standby Trust Agreement (9 VAC 25-590-100 and 9 VAC 25-590-120)**

Owners/operators may obtain a letter of credit to satisfy UST financial responsibility requirements. A letter of credit certifies that the issuer (e.g., bank) promises to pay an agreed amount, as directed by the Department, in the event that the owner/operator fails to meet his financial responsibility obligations. Owners/operators using a letter of credit must also establish a standby trust fund according to the Regulation. A complete financial responsibility package using a letter of credit will include the following materials:

**Appendix VI** – The Letter of Credit must be a signed, original document issued by an entity that has the authority to issue letters of credit in the Commonwealth of Virginia and whose operations are regulated and examined by the State Corporation Commission. Upon receipt of a letter of credit, the Financial Responsibility Manager will verify with the State Corporation Commission that the issuing institution meets these requirements.

A Letter of Credit must be irrevocable and worded *identically* to the language found in Appendix VI of the Regulation. The face of the letter of credit must provide the facility name, physical address(es), and the location of all USTs assured with this mechanism. The face amount of the letter of credit must be equal to the total annual aggregate or appropriate fraction if the letter of credit is used in combination with another payment mechanism.

**Appendix VII (Trust Agreement)** – Owners/operators required to establish a standby trust fund (i.e., those demonstrating with a guarantee, surety bond, and letter of credit) must complete a Trust Agreement. The language of the agreement must be identical to the language of the Trust Agreement described in Appendix VII. Trust Agreements must be irrevocable and shall continue until terminated at

the written direction of the grantor and the trustee, or by the trustee and the State Water Control Board.

**Appendix VIII (Certificate of Acknowledgement)** - Owners/operators required to establish a standby trust fund (i.e., those demonstrating with a guarantee, surety bond, and letter of credit) must complete a Certificate of Acknowledgement. The language of the certificate must be identical to the language of the certificate described in Appendix VIII of the Regulation. The Certificate of Acknowledgement must be notarized.

**Appendix IX (Certification of Financial Responsibility)** - See instructions for completing this form at the beginning of this Section.

**Certification of Annual Gallonage** – See instructions for completing this form at the beginning of this Section.

#### **5.4 Insurance and Group Self-Insurance Pool (9 VAC 25-590-80)**

Owners/operators may obtain liability insurance to demonstrate financial responsibility. Such insurance may be in the form of a separate policy or an endorsement to an existing policy. Upon receipt of an insurance policy, the Financial Responsibility Manager will verify with the State Corporation Commission (804-371-9741) that the insurer is licensed to practice insurance in the Commonwealth of Virginia. Owners/operators who obtain an insurance policy must include each of the following materials in their financial responsibility package:

**Insurance Policy** - Owners/operators must submit a complete copy of the insurance policy along with all accompanying endorsements. A financial responsibility package cannot be reviewed until the Department receives the complete insurance policy. The Financial Responsibility Manager will review all insurance policy exclusions and endorsements to ensure that no required coverage has been deleted or limited. Sometimes coverage, exclusions, named insured or site locations are added in the endorsements. Because these endorsements may replace or supplement the language in the original policy, the policy must be read in conjunction with any endorsements to make the correct financial responsibility determination.

The insurance policy must state that the insurer will pay out sums at the direction of the Department for the appropriate activities up to the face amount of the policy. The policy should provide first dollar coverage with a right of reimbursement by the Insurer from the Insured. The policy should state that the Insurer shall be liable for the payment of all amounts within any deductible applicable to the policy to the provider of corrective action or damaged third party as provided in the Regulation. The deductible/retention amount must equal or exceed the owner/operator's financial responsibility requirement.

The Financial Responsibility Manager will review a policy's declarations page to ensure that the owner/operator or corporate parent is the named insured; all covered facilities are listed; and the physical location(s) of the covered facility(ies) are covered locations under the policy. Finally, the

Financial Responsibility Manager will review the definitions, paying close attention to definitions of the following terms: coverage/covered incident/event/loss, release, underground storage tank, above ground storage tank, or corrective action.

**Appendix III (Endorsement) or Appendix IX (Certificate of Insurance)** – Owners/operators may elect to obtain either an endorsement to an existing policy or a Certificate of Insurance and must complete the appropriate appendix. Each appendix must be worded identically to the language found in the Regulation and must be a signed, original document. All documents must list the facility name(s), physical address(es), and location of all USTs assured by this mechanism.

**Certification of Annual Gallonage** – See instructions for completing this form at the beginning of this Section.

**Appendix IX (Certification of Financial Responsibility)** - See instructions for completing this form at the beginning of this Section.

#### **5.4.1 Access to Virginia Petroleum Storage Tank Fund in Conjunction with Insurance Policies**

It is important to note that many insurance companies will not issue policies for coverage in the exact amounts for which an owner/operator must demonstrate financial assurance; in fact, many insurance companies will not issue policies of value less than \$1 million. In these situations, the Department requires owners/operators to exhaust the value of an insurance policy fully *before* accessing the Virginia Petroleum Underground Storage Tank Fund (the Fund). The examples below illustrate various access scenarios to the Fund in conjunction with these types of policies. Each example assumes a single release requiring corrective action from a tank owned by an owner/operator who has an annual petroleum flow-through less than 600,000 gallons. Thus, according to Table 1 in Section 1 of this Volume, the owner/operator's per occurrence financial responsibility requirement for this scenario is \$5,000.

- If the dollar amount of the insurance policy **equals** the financial responsibility requirement (i.e., \$5,000) and there is no deductible, the owner/operator will have access to the Fund above that amount. According to the scenario above, the insurance company will cover the \$5,000 financial responsibility requirement and the owner/operator will have access to the Fund for the remainder of the \$1 million coverage provided by the Fund (i.e., \$995,000).
- If the dollar amount of the policy **exceeds** the financial responsibility requirement, the owner/operator is required to exhaust the value of the insurance policy fully before accessing the Fund. In the scenario above, if the insurance policy provides \$1 million coverage with no deductible, the owner/operator will be unable to access

the Fund because the insurance policy covers the full coverage amount provided by the Fund (i.e., \$1 million).

If the dollar amount of the policy *exceeds* the financial responsibility requirement and has a deductible that also exceeds the financial responsibility requirement, the owner/operator may access the Fund, but only to cover the remaining portion of the deductible that exceeds the financial responsibility amount. In the scenario above, assume the owner/operator has a \$1 million insurance policy with a deductible of \$25,000. According to the scenario above, the insurance policy will be responsible for the \$1 million policy minus the \$25,000 deductible, which is \$975,000. The owner/operator is responsible for the \$25,000 deductible but can access the Fund to cover the portion of the deductible that exceeds the financial responsibility requirement (i.e., \$5,000). Therefore, in the scenario, the owner/operator may access the Fund for the remainder of the deductible, which is \$20,000.

## **5.5 Surety Bond (9 VAC 590-90 and 9 VAC 25-590-120)**

A surety bond is a guarantee, issued by a surety company, that it will meet the obligations of an owner/operator in the event an owner/operator is unable to perform the necessary cleanup activities or pay a third party to perform the activity. Surety bonds must be issued by a company licensed to operate as a surety in the Commonwealth of Virginia. Licensed companies must be listed as an acceptable surety on federal bonds in the latest Circular 570 of the U.S. Department of the Treasury. This list can be accessed on the Department of the Treasury's website at [www.fms.treas.gov/c570/c570.html](http://www.fms.treas.gov/c570/c570.html). Upon receipt of a financial responsibility package, the Financial Responsibility Manager will verify all licensing through the Department of the Treasury and/or Virginia's State Corporation Commission.

Owners/operators using a surety bond for financial assurance must also establish a standby trust fund as required in the Regulation. A complete financial responsibility package using a surety bond will include the following materials:

**Appendix V (Performance Bond)** – A surety bond must be a signed, original document accompanied by a signed, notarized Power of Attorney indicating that the representative of the bonding company was authorized to sign on its behalf. The penal sum of the bond must indicate the corrective action sum per occurrence, the third party liability sum per occurrence, and the annual aggregate amount. The language of the surety bond must be identical to the language prescribed in Appendix V of the Regulation. The bond heading must indicate the period of coverage, the legal name and business address of the owner/operator, the number of USTs at each facility, and the name(s) and address(es) of the facilities where the tanks are located.

**Appendix VII (Trust Agreement)** – Owners/operators required to establish a standby trust fund (i.e., those demonstrating with a guarantee, surety bond, or letter of credit) must complete a Trust Agreement. The language of the agreement must be identical to the language of the Trust Agreement

described in Appendix VII. Trust Agreements must be irrevocable and shall continue until terminated at the written direction of the grantor and the trustee, or by the trustee and the State Water Control Board.

**Appendix VIII (Certificate of Acknowledgement)** - Owners/operators required to establish a standby trust fund (i.e., those demonstrating with a guarantee, surety bond, or letter of credit) must complete a Certificate of Acknowledgement. The language of the certificate must be identical to the language of the certificate described in Appendix VIII of the Regulation. The Certificate of Acknowledgement must be notarized.

**Appendix IX (Certification of Financial Responsibility)** - See instructions for completing this form at the beginning of this Section.

**Certification of Annual Gallonage** – See instructions for completing this form at the beginning of this Section.

## **5.6 Trust Fund and/or Standby Trust (9 VAC 25-590-110 and 120)**

With a trust fund, monies covering an owner/operator's financial responsibility requirements are held and administered by an impartial third party. The entire annual aggregate amount is placed into an independent fund and is kept separate from other assets. A complete financial responsibility package establishing a trust fund will include the following materials:

**Appendix VII (Trust Agreement)** – Owners/operators required to establish a standby trust fund (i.e., those demonstrating with a guarantee, surety bond, or letter of credit) must complete a Trust Agreement. The language of the agreement must be identical to the language of the Trust Agreement described in Appendix VII. Trust Agreements must be irrevocable and shall continue until terminated at the written direction of the grantor and the trustee, or by the trustee and the State Water Control Board.

**Certification of Annual Gallonage** – See instructions for completing this form at the beginning of this Section.

**Appendix IX (Certification of Financial Responsibility)** - See instructions for completing this form at the beginning of this Section.

**Note:** The Department will not accept trust funds designed to support multiple tanks in multiple states. The trust fund must be specific to tanks located in the Commonwealth of Virginia and must conform to the language provided in the state regulation.

## **5.7 Other Important Information**

### 5.7.1 Financial Data Verification

Owners/operators and guarantors completing Appendix I or Appendix XI must verify the financial data provided as part of the Letter from the Chief Financial Officer (e.g., total tangible assets, total liabilities, and tangible net worth). To satisfy this requirement, owners/operators may either:

- submit a financial review statement from an independent Certified Public Accountant;
- file their financial statements with an approved government regulatory agency (i.e., Securities & Exchange Commission, Energy Information Administration, or the Rural Electrification Administration); or
- have an assigned financial strength rating from Dunn & Bradstreet.

Owners/operators who file financial statements with the SEC, Energy Information Administration (EIA) or the Rural Electrification Administration also satisfy the requirements for presentation of financial data. These agencies are entities of the federal government and have financial verification requirements similar to the UST financial responsibility requirements. The Financial Responsibility Manager will contact the appropriate agency in cases where owners/operators indicate they submit to such agencies.

A discussion of each of these options is included below.

**Financial Review Statements** - Financial review statements verify that financial data included in the Letter from the Chief Financial Officer regarding assets, liabilities and net worth is consistent with the latest financial reporting year of the organization. Financial review statements may be based on audited financial reports, review/compilation reports, or year-end financial statements. *All financial review statements must be signed by an independent Certified Public Accountant.* Statements certified by bookkeepers, licensing agents, or accountants that are not Certified Public Accountants are not acceptable.

The statements must verify that the information provided in the Letter from the Chief Financial Officer is consistent with the business's actual year-end data, as reviewed by the Certified Public Accountant. When financial statements or year-end reports are submitted as supporting documentation, the Financial Responsibility Manager will review the financial report to confirm the figures in the financial test. Smaller businesses usually will not have audited financials or an annual report. The Financial Responsibility Manager will use discretion when determining if the submitted financial documents comply with the Regulation. Tax returns are **not** an acceptable means of indicating the financial status of an organization.

When reviewing audited financial statements, the Financial Responsibility Manager will



review the independent auditor's opinion, usually found at the beginning of the report, to confirm that it is an unqualified one. If there is a qualification in the opinion, the qualification must be reviewed carefully to determine whether a problem may exist with the entity's financial condition such that it would have a negative effect on the owner/operator/guarantor's ability to pay for corrective action and third party claim costs if a release occurs.

The Financial Responsibility Manager will also review the Balance Sheet with the annual financial report to confirm the figures in the financial test. If the figures do not match the financial statement, the Financial Responsibility Manager may need to obtain additional information from the owner/operator/guarantor.

**Securities & Exchange Commission (SEC)** - The SEC requires all public companies in the United States with over \$10 million in assets and more than 500 shareholders to file periodic reports demonstrating financial health. Owners/operators of organizations who submit such to the SEC fulfill the requirement for financial data. For more information, visit the SEC website at [www.sec.gov](http://www.sec.gov).

**Energy Information Administration (EIA)** - The EIA, created by Congress in 1977, is a statistical agency of the U.S. Department of Energy. Major energy-producing companies based in the United States report financial and operating data annually as part of EIA's global financial reporting system. Only the largest petroleum facilities (i.e., those that account for more than 1% of the total petroleum production) report via this system. In addition, all organizations reporting to the EIA also submit to the SEC. For more information, access the EIA website at [www.eia.doe.gov](http://www.eia.doe.gov).

**Rural Electrification Administration** - The Rural Electrification Administration, renamed the Rural Utilities Service (RUS) in 1993, is an agency of the U.S. Department of Agriculture. The RUS supports the development of power and other utilities in rural communities by financing electric, telecommunications, and water/wastewater projects through low-interest loans and grants to communities of fewer than 10,000 residents. Organizations that receive financing through RUS are required to provide detailed financial information to the administration. For more information, access the RUS website at [www.usda.gov/rus](http://www.usda.gov/rus).

**Dunn & Bradstreet** - Dunn & Bradstreet is a financial strength rating service. Businesses that submit financial information to Dunn & Bradstreet receive a financial strength rating based on a number of indicators including total assets and liabilities. As an example, a rating of EE indicates an organization has a net worth of \$20,000-\$34,000. A more complete description of Dunn & Bradstreet ratings that pertain the UST financial responsibility requirements are included as part of Appendices I and XI of the Regulation.

Owners/operators who have received an acceptable financial strength rating from Dun & Bradstreet (i.e., a rating that meets or exceeds its financial responsibility requirement) also meet the requirement for submission of financial data. The Financial Responsibility Manager will verify ratings with Dunn & Bradstreet upon receipt of a financial responsibility package.

For more information on Dunn & Bradstreet's full range of financial ratings or for information on receiving a financial strength rating, access the Dunn & Bradstreet website at [www.dnb.com](http://www.dnb.com) or call 800-234-3867.

### **5.7.2 Acceptable Forms of Documentation**

Owners/operators demonstrating financial assurance for USTs must provide original documentation to the Department for approval. Facsimile copies and photocopies are acceptable *only if the documents have original signatures*, or unless otherwise required by the Regulation (e.g., letters of credit and surety bonds must be original document from the issuing institution). Documentation submitted via facsimile to the Department and copies or photocopies of original documents are *not* acceptable.

All original letters of credit, surety bonds, trust agreements and standby trust agreements are filed in a secure location at the Department's Office of Financial Assurance. Copies of these mechanisms are kept in a duplicate file.

### **5.7.3 Compliance Letters**

When the financial assurance documentation is complete and in compliance with the Regulation, the Financial Responsibility Manager will send a compliance letter to the UST owner/operator, with a copy to the Regional Office.

## **6. Recordkeeping Requirements**

### **6.1 Record Retention**

Owners/operators demonstrating financial responsibility for regulated USTs are required to maintain evidence of financial assurance at the site of the UST or at the owner/operator's place of work if located in the Commonwealth of Virginia. Owners/operators are not required to submit documentation automatically to the Department, except under certain circumstances discussed in Section 7 of this Volume (e.g., after confirming a release, at the request of the Department, etc.). Any records maintained off site (e.g., at a corporate office location) must be made available at the request of the Department. In addition, owners/operators must update financial assurance documentation annually to reflect the most current financial standing.

## 6.2 Annual Updates

Owners/operators are required to update their records on an annual basis by the anniversary of the mechanism they have chosen to utilize. Table 2 below illustrates these specific timeframes.

<b>Table 2. UST Financial Assurance Mechanism Updates</b>	
<b>Financial Responsibility Mechanism</b>	<b>Annual Update Timeframe</b>
Letter from Chief Financial Officer	120 days after the close of the entity's fiscal year
Guarantee	120 days after the close of the entity's fiscal year
*Trust Fund	Anniversary of effective date of the trust fund
*Letter of Credit	Anniversary of effective date of the letter of credit
Insurance Policy	End of policy period (anniversary of effective date)
*Surety Bond	Anniversary of effective date of the bond
Certification of Financial Responsibility	Update annually
Certification of Annual Gallonage	Update when gallonage changes to affect owner/operator's financial responsibility amounts (see Table 1)
* The trust fund, letter of credit and surety bond are self-renewing mechanisms until notice of cancellation by issuing institution or owner/operator. While owners/operators do not need to update these mechanisms on an annual basis, they must review the mechanism annually to ensure it reflects their most current financial status. This review should take place on the date the owner/operator updates the Certification of Financial Responsibility.	

## 7. Reporting

Owners/operators must maintain current evidence of financial responsibility on site where USTs are located and must present the documentation to the Department under certain circumstances. These circumstances include:

- Immediately, upon the request of the Department.
- Within 30 days of a confirmed release from a regulated UST;
- Within 30 days after the owner/operator of a UST receives notice that the financial assurance provider is bankrupt, has had its authority to issue assurance mechanisms revoked or suspended, or has experienced any other incapacity;
- When the owner/operator receives notice that the guarantor fails to meet the financial test requirements contained in 9 VAC 25-590-70;
- Within 10 days, if the owner/operator fails to obtain a replacement mechanism within 150 days of determining he or she no longer satisfies the requirements of the financial test of self-insurance;

- Within 30 days of notification by the Department that he or she no longer meets the financial test requirements;
- Immediately, if a financial assurance provider cancels the mechanism and the owner/operator fails to obtain alternate coverage within 60 days of being notified of the cancellation; or
- Within 10 days after the commencement of any bankruptcy proceeding naming the owner/operator as debtor.

Owners/operators may keep financial responsibility documentation at a place of work that is located off site or at a corporate location, but only if that site is located in the Commonwealth of Virginia.

## **8. Financial Assurance Review Process**

Owners/operators are required to submit documentation of financial responsibility to the Department under certain circumstances. These situations are described in more detail in Section 7 of this Volume. The Financial Responsibility Manager will work in conjunction with the Regional Office inspection teams to ensure that owners/operators maintain adequate financial responsibility documentation. This section provides an overview of the process.

In general, the Regional Office inspection team will be responsible for collecting financial assurance documentation at the time of inspection, routing the information to the Office of Financial Assurance (OFA), and serving as an owners/operator's primary point of contact. The OFA will review the information for compliance and work with the owner/operator directly to bring the documentation into compliance with the Regulation. The process for collecting and reviewing financial responsibility documentation is discussed below in more detail.

- At inspection, the Regional Office inspection team collects the required financial responsibility documentation from the owner/operator and forwards the entire package to the OFA. If an owner/operator is unable to provide financial responsibility documentation at the time of inspection, the inspector will indicate on the notice of deficiency that the owner/operator must submit the required information to the Regional Office within a specific timeframe. Upon receipt, the Regional Office will forward the package to the Central Office for review.
- Upon receipt of the financial responsibility documents in the Central Office, the Financial Responsibility Manager will review the entire package for compliance with the Regulation by comparing the language of the documents to the language prescribed in the appropriate appendix of the Regulation. The review procedures for each mechanism are identical to those described in Section 5 of this Volume.
- If the financial assurance documents do not comply with the Regulation, the Financial Responsibility Manager will contact the owner/operator by letter. The letter should impose a 30-day deadline for

compliance. The Financial Responsibility Manager may grant one extension to a submission deadline; however, any additional extension requests should be cleared through the Regional Office staff. In the event that an owner/operator does not respond to inquiries from the OFA, the Financial Responsibility Manager will refer the entity to the appropriate Regional Office for enforcement action.

- Once an owner/operator has made all necessary revisions, the Financial Responsibility Manager will mail a letter to the owner/operator, copying the Regional Office, indicating that the owner/operator's financial responsibility obligation has been satisfied. The letter will also remind the owner/operator that annual updates are required by the Regulation. **Note:** The Financial Responsibility Manager will continue to work with the owner/operator directly during revisions. The Financial Responsibility Manager will not copy the Regional Office on these communications unless specifically requested to do so.
- **Note:** Information packets regarding UST financial responsibility requirements are available for distribution by the Regional Office inspection teams to assist owners/operators in preparing financial responsibility documentation. This information also includes contact information at the Central Office in the event the owner/operator needs any assistance in compiling the required information. The Regional Office inspection teams are encouraged to refer any questions to the OFA for further assistance or clarification. A copy of this packet is included as Attachment VI-A of this Volume.

## **9. Cancellation or Termination of a Mechanism**

Providers of financial assurance may cancel surety bonds, letters of credit, and guarantees or allow them to expire. In order to ensure continuous coverage, the Department will act to cash the expiring mechanism or make sure the owner/operator obtains alternate financial assurance before the mechanism expiration date.

In general, the financial institution issuing the mechanism must provide written notice to the owner/operator at least 120 days before cancellation or termination. Normally, the issuing institution will also notify the Department of the cancellation. Upon receiving the notice of cancellation, the owner/operator has 60 days to demonstrate an acceptable replacement mechanism to the Department. Upon receiving a copy of the cancellation notice, the Department will notify the owner/operator of this requirement and emphasize that if the Department does not receive a replacement within the 60-day timeframe, the Department will act to cash the mechanism. The letter will include a copy of the cancellation notice.

Any further action will depend upon whether the owner/operator submits an acceptable alternate financial assurance mechanism. Possible scenarios are discussed below.

### **9.1 Submission of Alternate Financial Assurance Mechanism**

Once an alternate mechanism is received from the facility owner/operator, the Financial Responsibility Manager will review it according to the procedures set out in Section 5 of this Volume. If the mechanism complies with the Regulation and is in the amount of the previous mechanism, the Financial Responsibility Manager will issue a letter to the financial assurance provider retracting the demand for the funds. The letter should be faxed to the provider and the facility owner/operator and the original mailed via certified mail to the provider. The Regional Office Compliance Manager, the Director of the Office of Financial Management (OFM Director) and the facility owner/operator should be copied on the letter.

If the replacement mechanism does not comply with the Regulation, the Financial Responsibility Manager will contact the facility owner/operator immediately with the required changes. If the facility owner/operator submits a corrected mechanism before the cashing date, the Financial Manager will complete the financial responsibility review process as described in Section 5. In the event an owner/operator fails to submit an acceptable revised financial responsibility package, the Agency will continue forward with cashing the mechanism, as discussed in the next subsection.

## **9.2 Failure to Submit Alternate Financial Assurance Mechanism**

If the Department does not receive an allowable replacement mechanism within 60 days, the Financial Responsibility Manager will send a demand letter via Federal Express to the financial assurance provider directing the provider to cash the mechanism and send the funds to the Department. The demand letter will be accompanied by the original mechanism and a signed sight draft, where applicable. The demand letter will instruct the issuing institution to transmit the funds to an account held by the Commonwealth of Virginia and will notify the OFM Director of the transmittal. The letter will specify that the transmission of funds should occur on the stated expiration date of the mechanism.

The Financial Responsibility Manager will copy the Regional Office Compliance Manager, OFM Director, and the facility owner/operator on the letter. The Financial Responsibility Manager will send a copy of the letter to the facility owner/operator along with a letter reiterating the requirement for an alternate mechanism.

If the facility owner/operator still does not submit a replacement mechanism or does not correct the problems identified by the OFA, the Department will not issue a retraction letter and the financial assurance provider will cash the mechanism and place the funds into the owner/operator's standby trust fund. If the Trustee of the standby trust fund is different than the institution cashing the mechanism, the Financial Responsibility Manager will contact the Trustee of the standby trust before issuing the letter in order to obtain transmittal instructions and to notify the Trustee that the funds will be forthcoming. The Financial Responsibility Manager will also request written confirmation upon receipt of

the funds. In every case, the Financial Responsibility Manager must confirm the transfer of funds to the standby trust before close of business on the date of the mechanism's expiration.

Upon receipt of an acceptable mechanism in the amount of the expired mechanism, the Department will return the funds to the facility owner/operator via registered mail.

### **9.3 Special Provisions for Cancellation of a Guarantee**

A guarantor may also decide, for reasons other than an incapacity such as bankruptcy or failure to satisfy the requirements of the financial test, that he/she no longer wants to provide the necessary financial assurance. In these situations, the guarantor must provide written notice to the owner/operator at least 120 days prior to termination of the guarantee; however, in this case the owner/operator has 60 days from the date of notification to demonstrate an acceptable replacement mechanism. The Department's process for cashing a guarantee is slightly different than a letter of credit or a surety bond.

In order to cash a guarantee (i.e., require a guarantor to place funds into a standby trust), the Department must also suspect that a release has occurred from a UST; determine the owner/operator has failed to perform required corrective action; or determine that the owner/operator has failed to satisfy a judgement based on a third party liability claim.

If the Department determines that it is, in fact, necessary to cash a guarantee, the OFA will follow the same procedures as discussed in Subsection 9.2.

## **10. Disqualification of a Financial Provider**

As opposed to Section 9, which discusses deliberate cancellation or termination of mechanisms by a financial assurance provider, situations may arise where a financial provider is unable to continue to provide sufficient financial assurance to satisfy the UST financial responsibility requirements. Examples of this include bankruptcy or a change in the financial status of an entity using a financial test. These situations may either be self-reported by the owner/operator/guarantor or the financial provider or may be determined upon review by the Department. In every case, owners/operators are required to obtain a replacement mechanism in the appropriate amounts within timeframes specified in the Regulation. The process for notifying the Department and obtaining new financial assurance is summarized below.

### **10.1 Bankruptcy or Other Incapacity**

If an owner/operator or other provider of financial assurance files for bankruptcy under Title 11, U.S. Code, the owner/operator must provide a replacement mechanism to the Department in the amount of the existing mechanism within 30 days of receiving notice of such an event. Once the owner/operator submits the replacement mechanism to the Regional Office, the Regional Office will then forward the new financial assurance mechanism to the OFA for review.

Upon receipt of a replacement mechanism from the owner/operator, the Financial Responsibility Manager will review it according to the procedures set out in Section 5 of this Volume. Once the mechanism complies with the Regulation and is in the amount required by the Regulation, the Financial Responsibility Manager will issue a letter to the owner/operator indicating such and releasing the existing mechanism. The Regional Office will be copied on the letter.

If the owner/operator does not provide acceptable financial assurance to replace the existing mechanism, the Financial Responsibility Manager will contact the Regional Office by memo indicating that the facility owner/operator has not complied with the Regulation and referring the entity to the Regional Office for enforcement action.

## **10.2 Financial Test No Longer Acceptable**

If evidence exists that an owner/operator/guarantor is in financial difficulty, the Financial Responsibility Manager will request any financial data deemed necessary to investigate the matter further. The Regional Office will be copied on any such request.

The Department can disqualify an owner/operator or a guarantor from using the financial test based on the receipt of financial data indicating the financial strength of the entity is insufficient to provide such demonstration. The determination can be based on a financial test submitted by the owner/operator/guarantor reflecting the most recent reporting year of the entity or based on information received during the year.

### **10.2.1 Department Determinations**

If the Financial Responsibility Manager determines that an owner/operator/guarantor no longer meets the financial test requirements the owner/operator must provide a replacement mechanism within 30 days of receiving notice. In the case of a guarantee, the guarantor must notify the owner/operator within ten days of receiving notice from the Department that he no longer meets the requirements of the financial test; however, the onus is on the *owner/operator* to provide the replacement mechanism for financial assurance within the 30-day timeframe, not the guarantor.

Upon receipt of a replacement mechanism from the owner/operator, the Financial



Responsibility Manager will review it according to the procedures in Section 5 of this Volume. If the mechanism complies with the Regulation and is in the amount guaranteed, then the Financial Responsibility Manager will issue a compliance letter to the owner/operator. The Regional Office and the guarantor will be copied on the letter.

If the owner/operator fails to provide an acceptable replacement mechanism within the 30-day time period, he must notify the Department immediately and the Financial Responsibility Manager will notify the Regional Office that the owner/operator has failed to provide adequate financial assurance and refer the case for appropriate enforcement action. Once an owner/operator has made all necessary revisions, the Financial Responsibility Manager will mail a letter to the owner/operator, copying the Regional Office, indicating that the owner/operator's financial responsibility obligation has been satisfied. The letter will also remind the owner/operator that annual updates are required by the Regulation.

### **10.2.2 Self-Reported**

If an owner/operator determines that he no longer meets the requirements of the financial test, he must provide a replacement mechanism to the Department within 150 days of the end of the year for which financial statements have been prepared.

In the case of a guarantee, if the guarantor determines that he no longer meets the requirements of the financial test he must notify the owner/operator within 120 days of the close of that financial reporting year. The notice must indicate to the owner/operator that the guarantee will expire 120 days from receipt of the notice. The owner/operator is then required to find a replacement mechanism within 30 days. If the operator is unable to secure a replacement mechanism within this timeframe, he must notify the Department immediately.

Upon receipt of a replacement mechanism, the Financial Responsibility Manager will review it according to the procedures in Section 5 of this Volume. If the mechanism complies with the Regulation and is in the amount guaranteed, then the Financial Responsibility Manager will issue a compliance letter.

If the owner/operator fails to obtain an acceptable replacement mechanism within the appropriate timeframe, he must notify the Department. The Financial Responsibility Manager will contact the Regional Office and the owner/operator by memo indicating that the entity has failed to provide adequate financial assurance and referring the case to the Regional Office for appropriate action.

## **11. Drawing on a Financial Assurance Mechanism**

UST owner/operators demonstrating financial assurance with a guarantee, surety bond or letter of credit must also establish a standby trust fund. The purpose of the standby trust fund is to receive money from the issuing institution or guarantor in the event that the State Water Control Board needs to access the money for corrective action costs of third party liability claims. The Department will require the funds be placed in the standby trust under any one of the following circumstances:

- The owner/operator fails to establish alternate financial assurance within 60 days after receiving notice of cancellation of the guarantee, surety bond, or letter of credit.

### **AND**

The State Water Control Board determines or suspects that a release from a UST covered by the mechanism has occurred, or the owner/operator notifies the State Water Control Board of a release.

- The State Water Control Board makes a final determination that a release has occurred and corrective action is necessary, and the owner/operator has not conducted the appropriate corrective action measures.
- The State Water Control Board has received a Certification of Valid Claims (Appendix X) from the owner/operator indicating that a third party liability claim should be paid.
- The State Water Control Board receives a court order against the owner/operator for bodily injury or property damage caused by an accidental release from a UST and it is determined that the owner/operator has not satisfied the judgement.

The amount of money requested for placement into the standby trust cannot exceed the limit of funds provided by the financial assurance mechanism. If costs for corrective action or claims exceed the balance of the standby trust (and the obligation of the owner/operator) the first priority will be for corrective action costs necessary to protect human health and the environment.

## **12. Release of an Owner/ Operator from the Financial Assurance Requirements**

Upon Regional Office approval of UST closure, an owner/operator is released from the obligation to demonstrate financial assurance for threat particular activity.

## **13. Financial Assurance Requirements for Local Governments**

Local governments that own or operate regulated petroleum USTs are subject to the financial responsibility requirements. "Local governments" include general purpose local governments and special purpose local government entities. Examples of general purpose entities include municipalities, townships, counties, towns, villages and parishes. Special purpose local government entities perform a

single, specific function and are generally designated as either public authorities or special districts. Special purpose entities include school districts, water and sewer authorities, transit authorities, and power authorities.

Local governments are subject to the same applicability standards as other owner/operator of USTs (refer to Section 1, Table 1, of this Volume). However, since the financial assurance mechanisms were originally developed to meet the needs of the private sector, additional methods are available to local governments. They include various local government bond-rating tests, financial tests, and various local government guarantees. A detailed discussion of the financial assurance mechanisms available to local governments is included Attachment VI-B of this Volume.

## **FINANCIAL RESPONSIBILITY DEMONSTRATION REVIEW PROCEDURES for ABOVEGROUND STORAGE TANKS AND PIPELINE FACILITIES**

### **14. Introduction**

Effective March 2, 2001, operators of regulated aboveground storage tank (AST) facilities having a maximum storage capacity of 25,000 gallons or greater of oil and operators of pipelines must demonstrate financial responsibility as a condition of operation. Operators of ASTs and pipelines (herein referred to as ASTs, collectively) must demonstrate per occurrence and annual aggregate financial responsibility for the containment and cleanup of discharges of oil in the amounts illustrated in Table 3 below.

<b>Table 3. AST Financial Responsibility Requirements</b>	
Type of Facility	Financial responsibility Requirement
Aboveground Storage Tanks	\$.05 per gallon of the aggregate aboveground storage tank capacity for <i>all</i> ASTs located in the Commonwealth of Virginia, not to exceed \$1,000,000
Pipelines	\$5,000,000
Note: Applicability for AST financial assurance is based on the <i>cumulative</i> storage capacity for all regulated ASTs located in the Commonwealth of Virginia. The applicability for the technical standards is based on storage capacity <i>per facility</i> .	

If there is more than one operator for a facility, only one operator is required to demonstrate financial responsibility; however, all operators are jointly responsible for ensuring compliance with the financial responsibility requirements.

To demonstrate financial responsibility, operators of ASTs may choose any one or combination of allowable mechanisms. Allowable mechanisms include a financial test of self-insurance, guarantee, insurance policy, surety bond, letter of credit, and a trust fund. Each mechanism is discussed in more detail in Section 5 of this Volume.

Operators are required to keep current evidence of financial responsibility on site where the AST is located or at the operator's place of work, provided the location is in the Commonwealth of Virginia. Operators are required to submit financial responsibility documentation to the Virginia Department of Environmental Quality (the Department) under certain circumstances, which are discussed in Section 8 of this Volume.

## **15. Authority**

Sections 62.1-44.34:11 and 62.1-44.34:16 of the State Water Control Law (SWCL) of the Code of Virginia provides the statutory authority to require an operator of a regulated AST to demonstrate financial assurance for containment and cleanup of discharges of oil. The Virginia Aboveground Storage Tank and Pipeline Facility Financial Responsibility Requirements Regulation, 9 VAC 25-640-10 *et seq.* (the Regulation) provides the regulatory authority for this requirement.

## **16. Definitions**

The definitions in the SWCL, Article 11, and the Regulation apply to this Volume.

## **17. Exemptions**

There are a number of exclusions in the Regulation for ASTs. The following types of ASTs are not required to demonstrate financial responsibility:

- Federal, state and local governments;
- Underground storage tanks regulated under a state program;
- ASTs with a capacity of 5,000 gallons or less used for storing heating oil for consumptive use on the premises where stored;
- Vessels;
- Licensed motor vehicles, unless used solely for the storage of oil;
- ASTs with a storage capacity of 660 gallons or less of oil;
- ASTs regulated by the Department of Mines, Minerals and Energy; Food, Drug and Cosmetic Act; RCRA; CERCLA; or the Clean Water Act;
- ASTs used to store liquid petroleum gases (propane, butane, etc.) and non-petroleum hydrocarbon-based animal and vegetable oils;
- Liquid traps or associated gathering lines related directly to oil or gas production or gathering operations;
- Surface impoundments, pits, or lagoons;
- Stormwater or wastewater collection systems;
- Operational equipment containing oil for operational purposes and oil-filled electrical equipment;

- ASTs used to contain oil for less than 120 days when used for oil spill cleanup, federal, state or local emergency response, or temporary on-site storage related to replacing permanent storage capacities;
- Flow-through process tanks;
- Oily water separators;
- ASTs containing dredge spoils;
- ASTs with an aggregate storage capacity of 1,100 gallons or less that are located on a farm or residence and are used for storing motor fuel for noncommercial purposes;
- Piping from an AST that is beyond the first valve and connects an AST with production process tanks or production process equipment; and
- ASTs storing asphalt and asphalt compounds.

## 18. Mechanisms for Demonstrating Financial Assurance

Operators of ASTs have six financial assurance mechanisms available to them and may choose any one or combination of mechanisms to satisfy their financial responsibility requirements. The types of mechanisms are identical to those available for owners/operators of underground storage tanks. To demonstrate compliance with a particular mechanism, operators must maintain certain documentation and complete specific appendices that are included in the Regulation. The number of appendices comprising a complete financial assurance package will vary according to the specific mechanism an AST operator has chosen to use. For example, an operator using the financial test of self-insurance must complete two appendices while an operator using a letter of credit must complete five.

Regardless of which mechanism an operator has chosen to use, there is one appendix that must be included as part of every complete financial responsibility package. Appendix IX, or the Certification of Financial Responsibility, is described in more detail below.

- **Certification of Financial Responsibility (Appendix IX)** - Every operator demonstrating financial responsibility must complete a Certification of Financial Responsibility, regardless of the mechanism used to comply with the Regulation. The Certification of Financial Responsibility must be the original, signed, and notarized document worded *identically* to the form shown in Appendix IX of the Regulation. The effective period of coverage for the Certification of Financial Responsibility is one year from the date the certification is notarized.
- **Note:** AST operators demonstrating financial responsibility are not required to complete a storage capacity certification that is similar to the Annual Gallonage Certification in the UST financial responsibility regulation. Rather, operators are required to indicate AST storage capacity as part of the AST registration process and as part of the AST Certification of Financial Responsibility. If it is necessary to verify an operator's AST storage capacity, refer to one of these references.

Certain general guidelines apply when completing the appendices to the Regulation. Each appendix required by a specific mechanism must be filled out ***completely*** and must be worded ***identically*** to the appendices in the Regulation. If an operator is using a fill-in-the blank appendix, every blank must be filled in. Some appendices require additional attachments as verification of information provided in the appendices. As part of the financial test of self-insurance, for example, operators may need to include financial statements to verify financial data provided in the letter.

A discussion of each mechanism and its unique requirements is included in the following subsections. Each subsection can be used as a checklist to ascertain whether a financial responsibility package is, in fact, complete.

### **18.1 Financial Test of Self Insurance (9 VAC 25-640-70)**

Operators may satisfy the financial responsibility requirements by passing a financial test of self-insurance, also known as a letter of self-insurance or letter from the Chief Financial Officer. A complete financial test of self-insurance package will contain the following materials:

**Appendix I (Letter from Chief Financial Officer)** – The wording of the letter from the chief financial officer must be identical to the wording in the Regulation and must be signed by the operator, Chief Financial Officer, or an authorized representative.

**Annual Financial Information** – Operators completing Appendix I must verify the financial data provided as part of the Letter from the Chief Financial Officer (i.e., total tangible assets, total liabilities, and tangible net worth). To satisfy this requirement, operators may either (1) submit a financial review statement from an independent Certified Public Accountant, (2) file their financial statements with an approved government regulatory agency, or (3) have an assigned financial strength rating from Dunn & Bradstreet. Each of these options is discussed further in Section 6.1 of this Volume.

**Appendix IX (Certification of Financial Responsibility)** - See instructions for completing this form at the beginning of this section.

### **18.2 Guarantee and Standby Trust Agreement (9 VAC 25-640-80 and 9 VAC 25-640-130)**

The guarantee allows a firm that is related to, or has a substantial business relationship with, an operator of a regulated AST to assure adequate financial responsibility coverage on behalf of the operator. A guarantor must be a parent of the operator (i.e., a parent anywhere along the corporate chain), an affiliate of the applicant (i.e., the guarantor has the same parent corporation as the operator), or a firm with a “substantial

business relationship” with the operator. A substantial business relationship is one of recent and ongoing business transactions that would make a guarantee contract under the laws of the Commonwealth of Virginia valid. The Financial Responsibility Manager will evaluate each situation on a case-by-case basis.

Operators using a guarantee must also establish a standby trust fund as specified in the Regulation. A complete financial responsibility package submitted by a guarantor demonstrating on behalf of an AST operator will include the following documentation:

**Appendix I (Letter from Chief Financial Officer)** - For more information on this requirement, refer to the discussion in Subsection 5.1 (financial test of self-insurance).

**Annual Financial Information** – For more information on this requirement, refer to the discussion in Section 6.1 (Financial Data Verification). Note: An operator may not use self-insurance in combination with the guarantee if the financial statements of the operator and guarantor have been consolidated to meet the requirements of the financial test of this chapter.

**Appendix II (Guarantee)**– The wording of the guarantee must be identical to the wording in the Regulation and must be signed by the guarantor and notarized.

**Appendix VII (Trust Agreement for Standby Trust Fund)** – Operators required to establish a standby trust fund (i.e., those demonstrating with a guarantee, surety bond, or letter of credit) must complete a Trust Agreement. The language of the agreement must be identical to the language of the Trust Agreement described in Appendix VII. The Trust Agreement must be irrevocable (i.e., automatically renewed or having specific conditions for cancellation or termination) and shall continue until terminated at the written direction of the grantor and the trustee, or by the trustee and the State Water Control Board.

**Appendix VIII (Certificate of Acknowledgement for Standby Trust Fund)** - Operators required to establish a standby trust fund (i.e., those demonstrating with a guarantee, surety bond, or letter of credit) must complete a Certificate of Acknowledgement. The language of the certificate must be identical to the language of the certificate described in Appendix VIII of the Regulation. The Certificate of Acknowledgement must be notarized.

**Appendix IX (Certification of Financial Responsibility)** - See instructions for completing this form at the beginning of this section.

### **18.3 Letter of Credit and Standby Trust Agreement (9 VAC 25-640-110 and 9 VAC 25-640-130)**

Operators may obtain a letter of credit to satisfy AST financial responsibility requirements. A letter of credit certifies that the issuer (e.g., bank) promises to pay an agreed amount, as directed by the Department, in the event that the operator fails to meet his financial responsibility obligations. Operators using a letter of credit must also establish a standby trust fund according to the Regulation. A complete financial responsibility package using a letter of credit will include the following materials:

**Appendix VI (Letter of Credit)** – The letter of credit must be a signed, original document issued by an entity that has the authority to issue letters of credit in the Commonwealth of Virginia and whose operations are regulated and examined by the State Corporation Commission. Upon receipt of a letter of credit, the Financial Responsibility Manager will verify with the State Corporation Commission (804-371-9733) that the issuing institution meets these requirements.

A letter of credit must be irrevocable and worded *identically* to the language found in Appendix VI of the Regulation. The face of the letter of credit must provide the facility name, physical address(es), and the location of all ASTs assured with this mechanism. The face amount of the letter of credit must be equal to the total annual aggregate or appropriate fraction if the letter of credit is used in combination with another financial responsibility mechanism.

**Appendix VII (Trust Agreement for Standby Trust Fund)** – Operators required to establish a standby trust fund (i.e., those demonstrating with a guarantee, surety bond, and letter of credit) must complete a Trust Agreement. The language of the agreement must be identical to the language of the Trust Agreement described in Appendix VII. Trust Agreements must be irrevocable and shall continue until terminated at the written direction of the grantor and the trustee, or by the trustee and the State Water Control Board.

**Appendix VIII (Certificate of Acknowledgement for Standby Trust Fund)** - Operators required to establish a standby trust fund (i.e., those demonstrating with a guarantee, surety bond, and letter of credit) must complete a Certificate of Acknowledgement. The language of the certificate must be identical to the language of the certificate described in Appendix VIII of the Regulation. The Certificate of Acknowledgement must be notarized.

**Appendix IX (Certification of Financial Responsibility)** - See instructions for completing this form at the beginning of this section.

## **18.4 Insurance and Group Self-Insurance Pool (9 VAC 25-640-90)**



Operators may obtain liability insurance to demonstrate financial responsibility. Such insurance may be in the form of a separate policy or an endorsement to an existing policy. Upon receipt of an insurance policy, the Financial Responsibility Manager will verify with the State Corporation Commission (804-371-9733) that the insurer is licensed to practice insurance in the Commonwealth of Virginia. Operators who obtain an insurance policy must include each of the following materials in their financial responsibility package:

**Text of Insurance Policy** - Operators must submit a complete copy of the insurance policy along with all accompanying endorsements. *A financial responsibility package cannot be reviewed until the Department receives the complete insurance policy.* Sometimes coverage, exclusions, named insured or site locations are added in the endorsements. Because these endorsements may replace or supplement the language in the original policy, the policy must be read in conjunction with any endorsements to make the correct financial responsibility determination. The Financial Responsibility Manager will review all insurance policy exclusions and endorsements to ensure that no required coverage has been deleted or limited.

The insurance policy must state that the insurer will pay out sums at the direction of the Department for the appropriate activities up to the face amount of the policy. The policy should provide first dollar coverage with a right of reimbursement by the Insurer from the Insured. The policy should state that the Insurer shall be liable for the payment of all amounts within any deductible applicable to the policy as specified in the Regulation. The deductible/retention amount must equal or exceed the operator's financial responsibility requirement.

The Financial Responsibility Manager will review a policy's declarations page to ensure that the operator or corporate parent is the named insured; all covered facilities are listed; and the physical location(s) of the covered facility(ies) are covered locations under the policy. Finally, the Financial Responsibility Manager will review the definitions, paying close attention to definitions such as coverage/covered incident/event/loss, discharge, aboveground storage tank, containment, and cleanup.

**Appendix III (Endorsement) or Appendix IV (Certificate of Insurance)** – Operators may elect to obtain either an endorsement to an existing policy or a Certificate of Insurance and must complete the appropriate appendix. Each appendix must be worded *identically* to the language found in the Regulation and must be a signed, original document. All documents must list the facility name(s), physical address(es), and location of all ASTs assured by this mechanism.

**Appendix IX (Certification of Financial Responsibility)** - See instructions for completing this form at the beginning of this section.

## **18.5 Surety Bond and Standby Trust Fund (9 VAC 25-640-100 and 9 VAC 25-640-130)**

A surety bond is a guarantee, issued by a surety company, that it will meet the obligations of an AST operator in the event the operator is unable to perform the necessary containment and cleanup activities or pay a third party to perform the activity.

Surety bonds must be issued by a company licensed to operate as a surety in the Commonwealth of Virginia. Licensed companies must be listed as an acceptable surety on federal bonds in the latest Circular 570 of the U.S. Department of the Treasury. This list can be accessed on the Department of the Treasury's website at [www.fms.treas.gov/c570/c570.html](http://www.fms.treas.gov/c570/c570.html). Upon receipt of a financial responsibility package, the Financial Responsibility Manager will verify all licensing through the Department of the Treasury and/or Virginia's State Corporation Commission.

Operators using a surety bond for financial assurance must also establish a standby trust fund as required in the Regulation. A complete financial responsibility package using a surety bond will include the following materials:

**Appendix V (Performance Bond)** – The surety bond must be a signed, original document accompanied by a signed, notarized Power of Attorney indicating that the representative of the bonding company was authorized to sign on its behalf. The penal sum of the bond must indicate the per occurrence and aggregate amount that applies to the AST operator. The language of the surety bond must be identical to the language prescribed in Appendix V of the Regulation. The bond heading must indicate the period of coverage, the legal name and business address of the operator, the number of ASTs at each facility, and the name(s) and address(es) of the facilities where the tanks/pipelines are located.

**Appendix VII (Trust Agreement for Standby Trust Fund)** – Operators required to establish a standby trust fund (i.e., those demonstrating with a guarantee, surety bond, or letter of credit) must complete a Trust Agreement. The language of the agreement must be identical to the language of the Trust Agreement described in Appendix VII. Trust Agreements must be irrevocable and shall continue until terminated at the written direction of the grantor and the trustee, or by the trustee and the State Water Control Board.

**Appendix VIII (Certificate of Acknowledgement for Standby Trust Fund)** - Operators required to establish a standby trust fund (i.e., those demonstrating with a guarantee, surety bond, or letter of credit) must complete a Certificate of Acknowledgement. The language of the certificate must be identical to the language of the certificate described in Appendix VIII of the Regulation. The Certificate of Acknowledgement must be notarized.

**Appendix IX (Certification of Financial Responsibility)** - See instructions for completing this form at the beginning of this section.

## **18.6 Trust Fund and/or Standby Trust (9 VAC 25-640-120 and 130)**

With a trust fund, monies covering an operator's financial responsibility requirements are held and administered by an impartial third party. The entire annual aggregate amount is placed into an independent fund and is kept separate from other assets. A complete financial responsibility package establishing a trust fund will include the following materials:

**Appendix VII (Trust Agreement)** – The language of the trust agreement must be *identical* to the language of the Trust Agreement described in Appendix VII. Trust Agreements must be irrevocable and shall continue until terminated at the written direction of the grantor and the trustee, or by the trustee and the State Water Control Board.

**Appendix VIII (Certificate of Acknowledgement)** - The language of the certificate must be identical to the language of the certificate described in Appendix VIII of the Regulation. The Certificate of Acknowledgement must also be notarized.

**Appendix IX (Certification of Financial Responsibility)** - See instructions for completing this form at the beginning of this section.

**Note:** The Department will not accept trust funds designed to support multiple ASTs in multiple states. The trust fund must be specific to tanks/pipelines located in the Commonwealth of Virginia and must conform to the language provided in the state regulation.

In addition, the wording of the trust fund, as specified in the Regulation, does not indicate the specific financial responsibility amounts an operator is required to demonstrate. In order to include this in the documentation, the Department requires AST operators to include the financial responsibility amounts as part of Attachment A to the trust agreement. Attachment A also includes a list of ASTs covered by the mechanism.

## **19. Other Important Information**

### **19.1 Financial Data Verification**

Operators and guarantors using the financial test of self-insurance must supply verification of the financial data provided as part of the letter from the Chief Financial

Officer (i.e., total tangible assets, total liabilities, and tangible net worth). To provide this verification, operators may either:

- submit a financial review statement from an independent Certified Public Accountant;
- file their financial statements with an approved government regulatory agency (i.e., Securities & Exchange Commission, Energy Information Administration, or the Rural Electrification Administration); or
- have an assigned financial strength rating from Dunn & Bradstreet.

Operators who file financial statements with the SEC, Energy Information Administration (EIA) or the Rural Electrification Administration also satisfy the requirements for presentation of financial data. These agencies are entities of the federal government and have financial verification requirements similar to the AST financial responsibility requirements. The Financial Responsibility Manager will contact the appropriate agency in cases where operators indicate they submit to such agencies.

#### **19.1.1 Financial Review Statement from an Independent Certified Public Accountant**

Financial review statements verify that financial data included in the letter from the Chief Financial Officer regarding assets, liabilities and net worth is consistent with the latest financial reporting year of the organization. Financial review statements may be based on audited financial reports, review/compilation reports, or year-end financial statements. *All financial review statements must be signed by an independent Certified Public Accountant.* Statements certified by bookkeepers, licensing agents, or accountants that are not Certified Public Accountants are not acceptable. In addition, statements from a Certified Public Accountant who is also employed by the operator are not acceptable as they are not considered to be independent for purposes of compliance with this regulation.

Statements from independent Certified Public Accountants must verify that the information provided in the letter from the Chief Financial Officer is consistent with the business's actual year-end data, as reviewed by the independent Certified Public Accountant.

Some operators may choose to submit actual financial reports with the AST financial assurance documentation. While this is acceptable as supporting documentation, it cannot substitute for the requirement to obtain the independent statement from an independent Certified Public Accountant. When financial statements or year-end reports are submitted as supporting documentation to the statement, the Financial Responsibility Manager will review the financial report to confirm the figures in the financial test. Smaller businesses usually will not have audited financials or an annual report to submit as supporting documentation but may submit balance sheets or other

information to support the financial data. Tax returns are ***not*** an acceptable means of indicating the financial status of an organization. Therefore, statements from an independent Certified Public Accountant that are based on tax returns are also not acceptable.

When reviewing audited financial statements, the Financial Responsibility Manager will review the independent auditor's opinion, usually found at the beginning of the report, to confirm that it is an unqualified one. If there is a qualification in the opinion, the qualification must be reviewed carefully to determine whether a problem may exist with the entity's financial condition such that it would have a negative effect on the operator/guarantor's ability to pay for containment and cleanup if a discharge occurs.

#### **19.1.2 Securities & Exchange Commission (SEC)**

The SEC requires all public companies in the United States with over \$10 million in assets and more than 500 shareholders to file periodic reports demonstrating financial health. Operators of organizations who submit this information to the SEC also fulfill the requirement for the provision of financial data. For more information, visit the SEC website at [www.sec.gov](http://www.sec.gov).

#### **19.1.3 Energy Information Administration (EIA)**

The EIA, created by Congress in 1977, is a statistical agency of the U.S. Department of Energy. Major energy-producing companies based in the United States report financial and operating data annually as part of EIA's global financial reporting system. Only the largest petroleum facilities (i.e., those that account for more than 1% of the total petroleum production) report via this system. In addition, all organizations reporting to the EIA also submit to the SEC. For more information, access the EIA website at [www.eia.doe.gov](http://www.eia.doe.gov).

#### **19.1.4 Rural Electrification Administration**

The Rural Electrification Administration, renamed the Rural Utilities Service (RUS) in 1993, is an agency of the U.S. Department of Agriculture. The RUS supports the development of power and other utilities in rural communities by financing electric, telecommunications, and water/wastewater projects through low-interest loans and grants to communities of fewer than 10,000 residents. Organizations that receive financing through RUS are required to provide detailed financial information to the Department of Agriculture that is consistent with the AST financial responsibility requirements. For more information, access the RUS website at [www.usda.gov/rus](http://www.usda.gov/rus).

### **19.1.5 Dunn & Bradstreet**

Dunn & Bradstreet is a financial strength rating service. Businesses that submit financial information to Dunn & Bradstreet receive a financial strength rating based on a number of indicators including total assets and liabilities. As an example, a rating of EE indicates an organization has a net worth of \$20,000-\$34,000. A more complete description of Dunn & Bradstreet ratings that pertain the AST financial responsibility requirements are included as part of Appendix I of the Regulation.

Operators who have received an acceptable financial strength rating from Dun & Bradstreet (i.e., a rating that meets or exceeds its financial responsibility requirement) also meet the requirement for submission of financial data. The Financial Responsibility Manager will verify ratings with Dunn & Bradstreet upon receipt of a financial responsibility package.

For more information on Dunn & Bradstreet's full range of financial ratings or for information on receiving a financial strength rating, access the Dunn & Bradstreet website at [www.dnb.com](http://www.dnb.com) or call 800-234-3867.

## **19.2 Acceptable Forms of Documentation**

Operators demonstrating financial assurance for ASTs must provide original documentation to the Department for approval. Facsimile copies and photocopies are acceptable *only if the documents have original signatures*, or unless otherwise required by the Regulation (e.g., letters of credit and surety bonds must be original document from the issuing institution). Documentation submitted via facsimile to the Department and copies or photocopies of original, signed documents are *not* acceptable.

All original letters of credit, surety bonds, trust agreements and standby trust agreements are filed in a secure location at the OFA. Copies of these mechanisms are kept in a duplicate file for reference purposes.

## **19.3 Compliance Letters**

When the financial assurance documentation is complete and in compliance with the Regulation, the Financial Responsibility Manager will send a compliance letter to the AST operator, and a copy to the Regional Office.

# **20. Recordkeeping Requirements**

## **20.1 Record Retention**

Operators demonstrating financial responsibility for regulated ASTs are required to maintain evidence of financial assurance at the site of the AST or at the operator's place of work, provided the location is within the Commonwealth of Virginia. Operators are not required to submit documentation automatically to the Department, except under certain circumstances discussed in Section 8 of this Volume. Any records maintained off site (e.g., at a corporate office location) must be made available at the request of the Department. In addition, operators must update financial assurance documentation annually to reflect the most current financial standing. These updates are discussed in the next subsection.

## 20.2 Annual Updates

AST operators are required to update financial responsibility documentation on an annual basis, normally by the anniversary of the mechanism they have chosen to utilize. Table 4 below illustrates the specific timeframes as they apply to each mechanism.

<b>Table 4. AST Financial Assurance Mechanism Updates</b>	
Financial Responsibility Mechanism	Annual Update Timeframe
Letter from Chief Financial Officer	120 days after the close of the entity's fiscal year
Guarantee	None, provided the operator continues to use the guarantee to demonstrate financial responsibility (must update the letter from the Chief Financial Officer annually, however)
*Trust Fund	Anniversary of effective date of the trust fund
*Letter of Credit	Anniversary of effective date of the letter of credit
Insurance Policy	End of policy period (an endorsement, rider or notice of extension is permissible, provided it is approved by the Department)
*Surety Bond	Anniversary of effective date of the bond
Certification of Financial Responsibility	Update annually or when the financial responsibility mechanism changes
Standby Trust Fund	None, provided financial assurance mechanism remains the same
* The trust fund, letter of credit and surety bond are self-renewing mechanisms until notice of cancellation by issuing institution or operator. While operators do not need to update these mechanisms on an annual basis, they must review the mechanism annually to ensure it reflects their most current financial status. This review should take place on the date the operator updates the Certification of Financial Responsibility.	

## 21. Reporting

Reporting requirements for operators of ASTs include specific scenarios in which operators must either *notify* the Department or *submit* evidence of financial responsibility. The various reporting requirements are summarized in the Table 5 below.

<b>Table 5. Reporting Requirements for Operators of ASTs</b>	
AST operators must <b><i>SUBMIT</i></b> evidence of financial assurance...	Regulatory Citation
<b>Immediately</b> , upon the request of the Department	9 VAC 25-640-160 F
Within <b>150 days</b> of the close of the most recent financial reporting year, if the AST operator finds he no longer satisfies the requirements of the test	9 VAC 25-640-70 E
Within <b>60 days</b> after receiving notice of termination from a financial assurance provider, provided the cancellation is for reasons <i>other than</i> bankruptcy or some other incapacity of the provider	9 VAC 25-640-150 B
Within <b>30 days</b> after receiving notice from a provider of bankruptcy or revocation/suspension of the authority to provide financial assurance	9 VAC 25-640-200 C
Within <b>30 days</b> of notification by the Department that the operator no longer meets the financial test requirements	9 VAC 25-640-70 F
AST operators must <b><i>NOTIFY</i></b> the Department ...	Regulatory Citation
Within <b>10 days</b> , if the operator fails to obtain a replacement mechanism within 150 days of determining he no longer satisfies the requirements of the financial test of self-insurance	9 VAC 25-640-70 G
<b>Immediately</b> , if a financial assurance provider cancels the mechanism for reasons <i>other than</i> bankruptcy or some other incapacity and the operator fails to obtain alternate coverage within 60 days of being notified of the cancellation	9 VAC 25-640-150 B
Within <b>10 days</b> after the commencement of any bankruptcy proceeding naming the operator as debtor	9 VAC 25-640-200 A
<b>Immediately</b> , if an operator fails to obtain alternate financial assurance within 30 days of receiving notice of bankruptcy/incapacity of the provider; suspension/revocation of authority to provide financial assurance from a provider; or failure of a guarantor to meet the financial test	9 VAC 25-640-160 C

## 22. Financial Assurance Review Process for ASTs

Operators of ASTs are required to submit documentation of financial responsibility to the Department under certain circumstances. These situations are described in more detail in Section 8 of this Volume. The Financial Responsibility Manager will work in conjunction with the Regional Office inspection teams to ensure that operators maintain adequate financial responsibility documentation. This section provides an overview of the process.

In general, the Regional Office will ask operators of ASTs to provide documentation of financial responsibility as part of every formal AST inspection. The inspection team will be responsible for collecting financial assurance documentation at the time of inspection, routing the information to the



Office of Financial Assurance (OFA), and serving as an operator's primary point of contact. The OFA will review the information for compliance and work with the operator directly to bring the documentation into compliance with the Regulation. The process for collecting and reviewing financial responsibility documentation is discussed in more detail below.

- At inspection, the Regional Office inspection team collects the required financial responsibility documentation from the operator and forwards the entire package to the OFA. If an operator is unable to provide financial responsibility documentation at the time of inspection, the inspector will indicate on the notice of deficiency that the operator must submit the required information to the Regional Office within a specific timeframe. Upon receipt, the Regional Office will forward the package to the OFA for review.
- Upon receipt of the financial responsibility documents in the OFA, the Financial Responsibility Manager will review the entire package for compliance with the Regulation by comparing the language of the documents to the language prescribed in the appropriate appendix of the Regulation. The review procedures for each mechanism are identical to those described in Section 5 of this Volume.
- If the financial assurance documents do not comply with the Regulation, the Financial Responsibility Manager will contact the operator by letter indicating that additional information is required. The letter should impose a 30-day deadline for compliance. The Financial Responsibility Manager may grant one extension to a submission deadline; however, any additional extension requests should be cleared through the Regional Office staff. In the event that an operator does not respond to inquiries from the OFA, the Financial Responsibility Manager will refer the entity to the appropriate Regional Office for enforcement action.
- Once an operator has made all necessary revisions, the Financial Responsibility Manager will issue a letter to the operator, copying the Regional Office, indicating that the operator's financial responsibility obligation has been satisfied. The letter will also remind the operator that annual updates are required by the Regulation. **Note:** The Financial Responsibility Manager will continue to work with the operator directly during revisions. The Financial Responsibility Manager will not copy the Regional Office on these communications unless the OFA receives a specific request to do so.
- **Note:** Information packets regarding AST financial responsibility requirements are available for distribution by the Regional Office inspection teams to assist operators in preparing financial responsibility documentation. This information also includes contact information at the OFA in the event the operator needs any assistance in compiling the required information. The Regional Office inspection teams are encouraged to refer any questions to the OFA for further assistance or clarification. A copy of this information packet is included as Attachment VI-C of this Volume.

## **23. Cancellation or Termination of a Mechanism**

Providers of financial assurance issuing surety bonds, letters of credit, insurance policies and guarantees may cancel mechanisms or allow them to expire. To cancel or terminate a mechanism, the Regulation contains specific notification procedures as well as requirement for operators to obtain alternate financial assurance to ensure continuous coverage for containment and cleanup in the event of a discharge from the AST.

### **23.1 Guarantees, Surety Bonds, Letters of Credit**

In general, a financial institution issuing a guarantee, surety bond or letter of credit must provide written notice to the operator at least 120 days before cancellation or termination. Normally, the issuing institution will also notify the Department of the cancellation. Upon receiving the notice of cancellation, the operator has 60 days to demonstrate an acceptable replacement mechanism to the Department.

Upon receiving a copy of the cancellation notice from the issuing institution, the Department will notify the operator of the requirement to obtain a replacement mechanism and emphasize that if the Department does not receive a replacement within the 60-day timeframe, the Department will act to cash the mechanism. The letter will include a copy of the cancellation notice.

Any further action will depend upon whether the operator submits an acceptable alternate financial assurance mechanism. Possible scenarios are discussed below.

#### **23.1.1 Failure to Submit Alternate Financial Assurance Mechanism**

If the Department does not receive an allowable replacement mechanism within 60 days, the Financial Responsibility Manager will send a demand letter via Federal Express to the financial assurance provider directing the provider to cash the mechanism and send the funds to the Department. The demand letter will be accompanied by the original mechanism and a signed sight draft, where applicable. The demand letter will instruct the issuing institution to transmit the funds to an account held by the Commonwealth of Virginia and will notify the Department's Director of the Office of Financial Management (OFM Director) of the transmittal. The letter will specify that the transmission of funds should occur on the stated expiration date of the mechanism (i.e., 120 days from the initial notification to the operator).

The Financial Responsibility Manager will copy the Regional Office Groundwater Manager, OFM Director, and the AST operator on the letter.

If the AST operator still does not submit a replacement mechanism or does not correct the problems identified by the OFA, the Department will cash the mechanism and place the funds into the operator's standby trust fund, as per instructions provided by the Department. If the Trustee of the standby trust fund is different than the institution

cashing the mechanism, the Financial Responsibility Manager will contact the Trustee of the standby trust to clarify transmittal instructions and to notify the Trustee that the funds will be forthcoming. The Financial Responsibility Manager will also request written confirmation upon receipt of the funds. In every case, the Financial Responsibility Manager must confirm the transfer of funds to the standby trust before close of business on the date of the mechanism's expiration.

Upon receipt of an acceptable mechanism in the amount of the expired mechanism, the Department will return the funds to the AST operator via registered mail.

#### **23.1.2 Submission of Alternate Financial Assurance Mechanism**

Once an alternate mechanism is received from the AST operator, the Financial Responsibility Manager will review it according to the procedures set out in Section 5 of this Volume. If the mechanism complies with the Regulation and is in the amount of the previous mechanism, the Financial Responsibility Manager will issue a letter to the financial assurance provider retracting the demand for the funds. The letter should be faxed to the provider and the operator, and the original mailed via certified mail to the provider. The Regional Office Groundwater Manager, the OFM Director and the AST operator should be copied on the letter.

If the replacement mechanism does not comply with the Regulation, the Financial Responsibility Manager will contact the operator immediately with the required changes.

If the operator submits a corrected mechanism before the cashing date, the Financial Manager will complete the financial responsibility review process as described in Section 5. In the event an operator fails to submit an acceptable revised financial responsibility package, the Agency will continue forward with cashing the mechanism, as discussed in the previous subsection.

### **23.2 Insurance Policies**

An insurance provider must provide an AST operator 60 days notice of its intention to terminate the policy. An exception to this is if the policy is being terminated for nonpayment of premium or misrepresentation by the insured. In these cases, the provider must provide 15 days notice of termination. In all cases, the operator has 60 days to obtain alternate financial assurance. If the operator fails to obtain alternate assurance within this timeframe, he must notify the Department. Reporting requirements for AST operators are discussed in more detail in section 8 of this Volume.

## **24. Disqualification of a Financial Provider**

As opposed to Section 11, which addresses deliberate cancellation or termination of mechanisms by a financial assurance provider, situations may arise where a financial provider is unable to continue to provide sufficient financial assurance to satisfy the AST financial responsibility requirements. Examples of this include bankruptcy, revocation of the authority to provide financial assurance, or a change in the financial status of an entity which renders it unable to satisfy the requirements of the financial test. These situations may either be self-reported by the operator or the financial provider, or may be determined upon review by the Department. In every case, operators are required to obtain a replacement mechanism in the appropriate amounts as specified in the Regulation. The process for notifying the Department and obtaining new financial assurance is summarized below.

#### **24.1 Bankruptcy or Other Incapacity**

If an operator or other provider of financial assurance files for bankruptcy under Title 11, U.S. Code, the operator must provide a replacement mechanism to the Department in the amount of the existing mechanism within 30 days of receiving notice of such an event. Once the operator submits the replacement mechanism to the Regional Office, the Regional Office will then forward the new financial assurance mechanism to the OFA for review.

Upon receipt of a replacement mechanism from the AST operator, the Financial Responsibility Manager will review it according to the procedures set out in Section 5 of this Volume. Once the mechanism complies with the Regulation and is in the amount required by the Regulation, the Financial Responsibility Manager will issue a letter to the operator indicating such and releasing the existing mechanism. The Regional Office will be copied on the letter.

If the operator does not provide acceptable financial assurance to replace the existing mechanism, the Financial Responsibility Manager will contact the Regional Office by memo indicating that the facility operator has not complied with the Regulation and referring the entity to the Regional Office for enforcement action.

#### **24.2 Financial Test No Longer Acceptable**

If evidence exists that an operator/guarantor is in financial difficulty, the Financial Responsibility Manager will request any financial data deemed necessary to investigate the matter further. The Regional Office will be copied on any such request.

The Department can disqualify an operator or a guarantor from using the financial test based on the receipt of financial data indicating the financial strength of the entity is unable to support the requirements of the financial test. The determination can be based on a financial test submitted by the operator/guarantor reflecting the entity's most recent reporting year or any other information received during the year.

### **24.2.1 Department Determinations**

If the Financial Responsibility Manager notifies an operator/guarantor that he no longer meets the financial test requirements the operator must provide a replacement mechanism within 30 days of receiving notice. In the case of a guarantee, the guarantor must notify the operator within ten days of receiving notice from the Department that he no longer meets the requirements of the financial test; however, the onus is on the operator to provide the replacement mechanism for financial assurance within the 30-day timeframe, not the guarantor.

Upon receipt of a replacement mechanism from the operator, the Financial Responsibility Manager will review it according to the procedures in Section 5 of this Volume. If the mechanism complies with the Regulation and is in the appropriate amount, then the Financial Responsibility Manager will issue a compliance letter to the operator. The Regional Office and the guarantor will be copied on the letter.

If the operator fails to provide an acceptable replacement mechanism within the 30-day time period, the Financial Responsibility Manager will notify the Regional Office that the operator has failed to provide adequate financial assurance and refer the case for appropriate enforcement action. Once an operator has made all necessary revisions, the Financial Responsibility Manager will issue a letter to the operator, copying the Regional Office, indicating that the operator's financial responsibility obligation has been satisfied. The letter will also remind the operator that annual updates are required by the Regulation.

### **24.2.2 Self-Reported**

If an operator determines that he is no longer meets the requirements of the financial test, he must provide a replacement mechanism to the Department within 150 days of the end of the year for which financial statements have been prepared. If the operator is unable to secure a replacement mechanism within these timeframes, he must notify the Department within 10 days.

If a guarantor determines that he no longer meets the requirements of the financial test, he must notify the operator within 120 days of the close of that financial reporting year. The notice must indicate to the operator that the guarantee will expire 120 days from receipt of the notice. The operator is required to find a replacement mechanism within 30 days after receiving notice of the event. If the operator is unable to secure a replacement mechanism within these timeframes, he must notify the Department as discussed in Section 8 of the Volume.

Upon receipt of a replacement mechanism, the Financial Responsibility Manager will

review it according to the procedures in Section 5 of this Volume. If the mechanism complies with the Regulation and is in the amount guaranteed, the Financial Responsibility Manager will issue a compliance letter.

If the operator fails to obtain an acceptable mechanism within the appropriate timeframe, he must notify the Department. The Financial Responsibility Manager will contact the Regional Office and the operator by memo indicating that the entity is not in compliance with the Regulation and referring the case to the Regional Office for appropriate enforcement action.

## **25. Drawing on a Financial Assurance Mechanism**

AST operators demonstrating financial assurance with a guarantee, surety bond or letter of credit must also establish a standby trust fund. The purpose of the standby trust fund is to receive money from the issuing institution or guarantor in the event that the State Water Control Board needs to access the money for containment and cleanup. The Department will require the funds be placed in the standby trust under any one of the following circumstances:

- The operator fails to establish alternate financial assurance within 60 days after receiving notice of cancellation of the guarantee, surety bond, or letter of credit.

**AND**

The State Water Control Board determines or suspects that a discharge from an AST covered by the mechanism has occurred and notifies the operator, or the operator has notified the State Water Control Board of a discharge pursuant to 9 VAC 25-91-10 *et seq.*

- The State Water Control Board makes a final determination that a discharge has occurred and containment and/or cleanup is necessary, and the operator, given appropriate notices, has not conducted the appropriate containment and cleanup measures.

### **25.1 Replenishment of Guarantees, Surety Bonds, and Letters of Credit**

When the Department cashes a guarantee, surety bond, or letter of credit and the issuing institution transmits the appropriate funds to the standby trust, it is possible that the Department will access the funds in increments rather than in bulk quantities. Consequently, the amount of funds contained within a standby trust will fall below the required amount required by the Regulation.

Operators of ASTs are required to replenish the standby trust if it is reduced below the full amount of coverage. Replenishment must occur by the anniversary date of the mechanism from which the funds were drawn and must be in the amount that replenishes the standby trust to the full amount required by the Regulation. Operators also have the option to obtain an additional financial assurance mechanism to cover the amount of

funds necessary to equal the full amount required by the Regulation.

## **26. Release from Financial Assurance Requirements**

An operator of an AST or pipeline is no longer required to maintain financial responsibility once the tank or pipeline has been closed permanently according to regulation, except when the Department determines that cleanup of a discharge from an AST is required.





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**Virginia Department of Environmental Quality  
Petroleum Storage Tank Program**

## **Inspection Notice Supplement: Financial Responsibility for USTs**

State law requires owners and/or operators of regulated underground storage tanks (USTs) to show they have the financial resources to clean up a site and compensate injured third parties in the event a petroleum release occurs. The amount of coverage depends on the owner's/operator's annual petroleum throughput for all regulated USTs owned/operated in Virginia. Following are the required coverage amounts:

<b>Annual Throughput (Gallons)</b>	<b>Corrective Action (Per Occurrence)</b>	<b>Third Party Liability (Per Occurrence)</b>	<b>Annual Aggregate (Per Occurrence)</b>
600,000 or less	\$5,000	\$15,000	\$20,000
600,000–1.2 Million	\$10,000	\$30,000	\$40,000
1,200,001-1.8M	\$20,000	\$60,000	\$80,000
1,800,001-2.4M	\$30,000	\$120,000	\$150,000
Above 2.4M	\$50,000	\$150,000	\$200,000

To demonstrate financial responsibility, the owner/operator must provide: (1) **a gallonage certification** that reports the owner's/operator's annual throughput ([see page 25](#)), and (2) **proof of at least one of the following forms of financial responsibility** (in the form specified in 9 VAC 25-590-10 et seq., Appendices, attached), updated for the current year:

<b>Financial Responsibility Mechanism</b>	<b>Supporting Documents Appendix:</b>
Letter of Self- Insurance (Letter from the Chief Financial Officer)	<ul style="list-style-type: none"> <li>▲ I or <b>XI and</b></li> <li>▲ IX</li> </ul>
Guarantee	<ul style="list-style-type: none"> <li>• I or XI (by the Guarantor) <b>and</b></li> <li>• II <b>and</b></li> <li>• VII <b>and</b></li> <li>• VIII <b>and</b></li> <li>• IX</li> </ul>
Surety Bond (Performance Bond)	<ul style="list-style-type: none"> <li>• V <b>and</b></li> <li>• VII <b>and</b></li> <li>• VIII <b>and</b></li> <li>• IX</li> </ul>
Trust Agreement	<ul style="list-style-type: none"> <li>• VII <b>and</b></li> <li>• IX</li> </ul>
Letter of Credit (Irrevocable Standby Letter of Credit)	<ul style="list-style-type: none"> <li>• VI <b>and</b></li> <li>• VII <b>and</b></li> <li>• VIII <b>and</b></li> <li>• IX</li> </ul>
Insurance and Group Self-Insurance Pools (Endorsement or Certificate of Insurance)	<ul style="list-style-type: none"> <li>• III or IV <b>and</b></li> <li>• IX <b>and</b></li> <li>• Entire text of policy, the declarations page, and any endorsements</li> </ul>

Please provide your complete Financial Responsibility Mechanism and gallonage certification to your inspector during the scheduled inspection. If you have questions regarding how to prepare a financial responsibility mechanism, please call Cara Kail at (804) 698-4053. The forms may be downloaded from DEQ's website at [www.deq.state.va.us/tanks](http://www.deq.state.va.us/tanks) by clicking on the Download Documents icon.

## APPENDIX I.

### LETTER FROM CHIEF FINANCIAL OFFICER

[NOTE: The instructions in brackets are to be replaced by the relevant information and the brackets deleted.]

I am the chief financial officer of [insert name and address of the owner or operator or guarantor]. This letter is in support of the use of [insert "the financial test of self-insurance," and/or "Guarantee"] to demonstrate financial responsibility for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage"] caused by [insert "sudden accidental releases" and/or "nonsudden accidental releases"] in the amount of at least [insert dollar amount] per occurrence and [insert dollar amount] annual aggregate arising from operating (an) underground storage tank(s).

Underground storage tanks at the following facilities are assured by this financial test by this [insert "owner or operator," and/or "guarantor"]: [List for each facility the name and address of the facility where tanks assured by this financial test are located, and whether tanks are assured by this financial test. If separate mechanisms or combinations of mechanisms are being used to assure any of the tanks at this facility, list each tank assured by this financial test by the tank identification number provided in the notification submitted pursuant to 9 VAC 25-580-70 (Underground Storage Tanks: Technical Standards and Corrective Action Requirements)].

A [insert "financial test," and/or "guarantee"] is also used by this [insert "owner or operator" or "guarantor"] to demonstrate evidence of financial responsibility in the following amounts under other EPA regulations or state programs authorized by EPA under 40 CFR Parts 271 and 145 (1997):

EPA Regulation for each state of business operations (specify state):

	Amount
Closure (Sections 264.143 and 265.143)	\$ _____
Post-Closure Care (Sections 264.145 and 265.145)	\$ _____
Liability Coverage (Sections 264.147 and 265.147)	\$ _____
Corrective Action (Section 264.101(b))	\$ _____
Plugging and Abandonment (Section 144.63)	\$ _____

Other State Programs (specify state):

Closure	\$ _____
Post-Closure Care	\$ _____
Liability Coverage	\$ _____
Corrective Action	\$ _____
Plugging and Abandonment	\$ _____

Virginia Hazardous Waste Management Regulations:

Closure (9 VAC 20-60-810 C and 9 VAC 20-60-590 C)	\$ _____
Post-Closure Care (9 VAC 20-60-810 E and 9 VAC 20-60-590 E)	\$ _____
Liability Coverage (9 VAC 20-60-810 G and 9 VAC 20-60-590 G)	\$ _____
Corrective Action (9 VAC 20-60-790 L 2)	\$ _____
Plugging and Abandonment (40 CFR Section 144.63) (1997)	\$ _____

**TOTAL** \$ \_\_\_\_\_

This [insert "owner or operator," or "guarantor"] has not received an adverse opinion, a disclaimer of opinion, or a "going concern" qualification from an independent auditor on his financial statements for the latest completed fiscal year.

[Fill in the information for Alternative I if the criteria of 9 VAC 25-590-60 B are being used to demonstrate compliance with the financial test requirements. Fill in the information for Alternative II if the criteria of 9 VAC 25-590-60 C are being used to demonstrate compliance with the financial test requirements.]

### ALTERNATIVE I

1. Amount of annual UST aggregate coverage being assured by a financial test, and/or guarantee: \$\_\_\_\_\_
2. Amount of corrective action, closure and post-closure care costs, liability coverage, and plugging and abandonment costs covered by a financial test, and/or guarantee: \$\_\_\_\_\_
3. Sum of lines 1 and 2 \$\_\_\_\_\_
4. Total tangible assets \$\_\_\_\_\_
5. Total liabilities [if any of the amount reported on line 3 is included in total liabilities, you may deduct that amount from this line or add that amount to line 6] \$\_\_\_\_\_
6. Tangible net worth [subtract line 5 from line 4] \$\_\_\_\_\_
7. Is line 6 at least equal to line 1 above? Yes.... No.....
8. Is line 6 at least equal to the sum of line 1 plus 10 times line 2? Yes.... No....
9. Have financial statements for the latest financial reporting year been filed with the Securities and Exchange Commission? Yes.... No....
10. Have financial statements for the latest financial reporting year been filed with the Energy Information Administration? Yes.... No....
11. Have financial statements for the latest financial reporting year been filed with the Rural Electrification Administration? Yes.... No....
12. Has financial information been provided to Dun and Bradstreet, and has Dun and Bradstreet provided a financial strength rating at least equal to the amount of annual UST aggregate coverage being assured according to the table below?

Annual Aggregate Requirement	Dun and Bradstreet Rating
\$20,000	EE (\$20,000 - \$34,999)
\$40,000	DC (\$50,000-\$74,999)
\$80,000	CB (\$125,000 - \$199,999)
\$150,000	BB(\$200,000 - \$299,999)
\$200,000	BB (\$200,000 – \$299,999)

[Answer "Yes" only if both criteria have been met.] Yes.... No....

13. If you did not answer yes to one of lines 9 through 12, please attach a report from a certified public accountant certifying that there are no material differences between the data reported in lines 4 through 8 above and the financial statements for the latest financial reporting year.

## ALTERNATIVE II

1. Amount of annual UST aggregate coverage being assured by a financial test, and/or guarantee: \$\_\_\_\_\_
2. Amount of corrective action closure and post-closure care costs, liability coverage, and plugging and abandonment costs covered by a financial test, and/or guarantee: \$\_\_\_\_\_
3. Sum of lines 1 and 2 \$\_\_\_\_\_
4. Total tangible assets \$\_\_\_\_\_
5. Total liabilities [if any of the amount reported on line 3 is included in total liabilities, you may deduct that amount from this line or add that amount to line 6] \$\_\_\_\_\_
6. Tangible net worth [subtract line 5 from line 4] \$\_\_\_\_\_
7. Total assets in the U.S. [required only if less than 90% of assets are located in the U.S.] \$\_\_\_\_\_
8. Is line 6 at least equal to line 1 above? Yes\_\_\_ No\_\_\_
9. Is line 6 at least equal to the sum of line 1 plus 6 times the sum of line 2? Yes\_\_\_ No\_\_\_
10. Are at least 90% of assets located in the U.S.? [If "No," complete line 11.] Yes\_\_\_ No\_\_\_
11. Is line 7 at least equal to the sum of line 1 plus 6 times the sum of line 2? Yes\_\_\_ No\_\_\_

[Fill in either lines 12-15 or lines 16-18:]

12. Current assets \$\_\_\_\_\_
13. Current liabilities \$\_\_\_\_\_
14. Net working capital subtract line 13 from line 12 \$\_\_\_\_\_
15. Is line 14 at least equal to the sum of line 1 plus 6 times the sum of line 2? Yes\_\_\_ No\_\_\_
16. Current bond rating of most recent bond issue? Yes\_\_\_ No\_\_\_
17. Name of rating service \_\_\_\_\_
18. Date of maturity of bond \_\_\_\_\_
19. Have financial statements for the latest financial reporting year been filed with the SEC, the Energy Information Administration, or the Rural Electrification Administration? Yes\_\_\_ No\_\_\_

[If "no," please attach a report from an independent certified public accountant certifying that there are no material differences between the data reported in lines 4-18 above and the financial statements for the latest financial reporting year.]

[For Alternatives I and II complete the certification with this statement.]

I hereby certify that the wording of this letter is identical to the wording specified in Appendix I of this chapter as such regulations were constituted on the date shown immediately below.

[Signature]

[Name]

[Title]

[Date]

## APPENDIX II

### GUARANTEE

[NOTE: The instructions in brackets are to be replaced by the relevant information and the brackets deleted.]

Guarantee made this [date] by [name of guaranteeing entity], a business entity organized under the laws of the state of [insert name of state], herein referred to as guarantor, to the State Water Control Board of the Commonwealth of Virginia and to any and all third parties, and obligees, on behalf of [owner or operator] of [business address].

#### Recitals.

(1) Guarantor meets or exceeds the financial test criteria of 9 VAC 25-590-60 B or C and D of Virginia Petroleum Underground Storage Tank Financial Responsibility Requirements, 9 VAC 25-590-10 et seq., and agrees to comply with the requirements for guarantors as specified in 9 VAC 25-590-70 B.

(2) [Owner or operator] owns or operates the following underground storage tank(s) covered by this guarantee: [List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to 9 VAC 25-580-70. (Underground Storage Tanks: Technical Standards and Corrective Action Requirements), and the name and address of the facility]. This guarantee satisfies this chapter's requirements for assuring funding for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases" if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the above-identified underground storage tank(s) in the amount of [insert dollar amount] per occurrence and [insert dollar amount] annual aggregate.

(3) [Insert appropriate phrase: "On behalf of our subsidiary" (if guarantor is corporate parent of the owner or operator); "On behalf of our affiliate" (if guarantor is a related firm of the owner or operator); or "Incident to our business relationship with" (if guarantor is providing the guarantee as an incident to a substantial business relationship with owner or operator)] [owner or operator], guarantor guarantees to the State Water Control Board and to any and all third parties that:

In the event that [owner or operator] fails to provide alternate coverage within 60 days after receipt of a notice of cancellation of this guarantee and the State Water Control Board has determined or suspects that a release has occurred at an underground storage tank covered by this guarantee, the guarantor, upon instructions from the State Water Control Board, shall fund a standby trust fund in accordance with the provisions of 9 VAC 25-590-170, in an amount not to exceed the coverage limits specified above.

In the event that the State Water Control Board determines that [owner or operator] has failed to perform corrective action for releases arising out of the operation of the above-identified tank(s) in accordance with 9 VAC 25-580-230 through 9 VAC 25-580-300 (Underground Storage Tanks: Technical Standards and Corrective Action Requirements), the guarantor upon written instructions from the State Water Control Board shall fund a standby trust in accordance with the provisions of 9 VAC 25-590-170, in an amount not to exceed the coverage limits specified above.

If [owner or operator] fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by ["sudden" and/or "nonsudden"] accidental releases arising from the operation of the above-identified tank(s), or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the guarantor, upon written instructions from the State Water Control Board, shall fund a standby trust in accordance with the provisions of 9 VAC 25-590-170 to satisfy such judgment(s), award(s), or settlement agreement(s) up to the limits of coverage specified above.

(4) Guarantor agrees that if, at the end of any fiscal year before cancellation of this guarantee, the guarantor fails to meet the financial test criteria of 9 VAC 25-590-60 B or C and D, guarantor shall send within 120 days of such failure, by certified mail, notice to [owner or operator]. The guarantee will terminate 120 days from the date of receipt of the notice by [owner or operator], as evidenced by the return receipt.

(5) Guarantor agrees to notify [owner or operator] by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming guarantor as debtor, within 10 days after commencement of the proceeding.

(6) Guarantor agrees to remain bound under this guarantee notwithstanding any modification or alteration of any obligation of [owner or operator] pursuant to 9 VAC 25-580-10 et seq. and 9 VAC 25-590-10 et seq..

(7) Guarantor agrees to remain bound under this guarantee for so long as [owner or operator] shall comply with the applicable financial responsibility requirements of 9 VAC 25-590-10 et seq. for the above-identified tank(s), except that guarantor may cancel this guarantee by sending notice by certified mail to [owner or operator], such cancellation to become effective no earlier than 120 days after receipt of such notice by [owner or operator], as evidenced by the return receipt.

(8) The guarantor's obligation does not apply to any of the following:

(a) Any obligation of [insert owner or operator] under a workers compensation, disability benefits, or unemployment compensation law or other similar law;

(b) Bodily injury to an employee of [insert owner or operator] arising from, and in the course of, employment by [insert owner or operator];

(c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;

(d) Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by [insert owner or operator] that is not the direct result of a release from a petroleum underground storage tank;

(e) Bodily damage or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 9 VAC 25-590-40.

(9) Guarantor expressly waives notice of acceptance of this guarantee by the State Water Control Board, by any or all third parties, or by [owner or operator].

I hereby certify that the wording of this guarantee is identical to the wording specified in Appendix II of 9 VAC 25-590-10 et seq. as such regulations were constituted on the effective date shown immediately below.

Effective date:

[Name of guarantor]

[Authorized signature for guarantor]

[Name of person signing]

[Title of person signing]

Signature of witness or notary:



### APPENDIX III

#### ENDORSEMENT

[NOTE: The instructions in brackets are to be replaced by the relevant information and the brackets deleted.]

Name: [name of each covered location]

Address: [address of each covered location]

Policy number:

Period of coverage: [current policy period]

Name of [Insurer or Group Self Insurance Pool]:

Address of [Insurer or Group Self Insurance Pool]:

Name of Insured:

Address of Insured:

Endorsement:

1. This endorsement certifies that the policy to which the endorsement is attached provides liability insurance covering the following underground storage tanks in connection with the insured's obligation to demonstrate financial responsibility under the Virginia Petroleum Underground Storage Tank Financial Requirements Regulation (9 VAC 25-590-10 et seq.).

[List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to 9 VAC 25-580-70 (Underground Storage Tanks: Technical Standards and Corrective Action Requirements), and the name and address of the facility.]

for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases";] in accordance with and subject to the limits of liability, exclusions, conditions, and other terms of the policy; [if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the underground storage tank(s) identified above.

The limits of liability are [insert the dollar amount of the corrective action "each occurrence" and third party "each occurrence" and "annual aggregate" limits of the Insurer's or Group's liability; if the amount of coverage is different for different types of coverage or for different underground storage tanks or locations, indicate the amount of coverage for each type of coverage and/or for each underground storage tank or location], exclusive of legal defense costs, which are subject to a separate limit under the policy. This coverage is provided under [policy number]. The effective date of said policy is [date].

2. The insurance afforded with respect to such occurrences is subject to all of the terms and conditions of the policy; provided, however, that any provisions inconsistent with subsections (a) through (d) for occurrence policies and (a) through (e) for claims-made policies of this Paragraph 2 are hereby amended to conform with subsections (a) through (e):

a. Bankruptcy or insolvency of the insured shall not relieve the ["Insurer" or "Pool"] of its obligations under the policy to which this endorsement is attached.

b. The ["Insurer" or "Pool"] is liable for the payment of amounts within any deductible applicable to the policy to the provider of corrective action or a damaged third-party, with a right of reimbursement by the insured for any such payment made by the ["Insurer" or "Pool"]. This provision does not apply with respect to that amount of

any deductible for which coverage is demonstrated under another mechanism or combination of mechanisms as specified in 9 VAC 25-590-60 through 9 VAC 25-590-110.

c. Whenever requested by the State Water Control Board, the ["Insurer" or "Pool"] agrees to furnish to State Water Control Board the signed duplicate original of the policy and all endorsements.

d. Cancellation or any other termination of the insurance by the ["Insurer" or "Pool"], except for nonpayment of premium or misrepresentation by the insured, will be effective only upon written notice and only after the expiration of 60 days after a copy of such written notice is received by the insured. Cancellation for nonpayment of premium or misrepresentation by the insured will be effective only upon written notice and only after expiration of a minimum of 15 days after a copy of such written notice is received by the insured.

[Insert for claims-made policies:

e. The insurance covers claims otherwise covered by the policy that are reported to the ["Insurer" or "Pool"] within six months of the effective date of cancellation or nonrenewal of the policy except where the new or renewed policy has the same retroactive date or a retroactive date earlier than that of the prior policy, and which arise out of any covered occurrence that commenced after the policy retroactive date, if applicable, and prior to such policy renewal or termination date. Claims reported during such extended reporting period are subject to the terms, conditions, limits, including limits of liability, and exclusions of the policy.]

I hereby certify that the wording of this endorsement is in no respect less favorable than the coverage specified in APPENDIX III of 9 VAC 25-590-10 et seq. and has been so certified by the State Corporation Commission of the Commonwealth of Virginia. I further certify that the ["Insurer" or "Pool"] is ["licensed to transact the business of insurance or eligible to provide insurance as an excess or surplus lines insurer in the Commonwealth of Virginia"].

[Signature of authorized representative of Insurer or Group Self Insurance Pool]

[Name of person signing]

[Title of person signing], Authorized Representative of [name of Insurer or Group Self Insurance Pool]

[Address of Representative]

**APPENDIX IV**  
**CERTIFICATE OF INSURANCE**

[NOTE: The instructions in brackets are to be replaced by the relevant information and the brackets deleted.]

Name: [name of each covered location]

Address: [address of each covered location]

Policy number:

Endorsement (if applicable):

Period of coverage: [current policy period]

Name of [Insurer or Group Self Insurance Pool]:

Address of [Insurer or Group Self Insurance Pool]:

Name of Insured:

Address of Insured:

Certification:

1. [Name of Insurer or Group Self Insurance Pool], [the "Insurer" or "Pool"], as identified above, hereby certifies that it has issued liability insurance covering the following underground storage tank(s) in connection with the insured's obligation to demonstrate financial responsibility under the Virginia Petroleum Underground Storage Tank Financial Requirements Regulation (9 VAC 25-590-10 et seq.).

[List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to 9 VAC 25-590-70 (Underground Storage Tanks; Technical Standards and Corrective Action Requirements), and the name and address of the facility.]

for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"]; in accordance with and subject to the limits of liability, exclusions, conditions, and other terms of the policy; [if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the underground storage tank(s) identified above.

The limits of liability are [insert the dollar amount of the corrective action "each occurrence" and third party "each occurrence" and "annual aggregate" limits of the Insurer's or Group's liability; if the amount of coverage is different for different types of coverage or for different underground storage tanks or locations, indicate the amount of coverage for each type of coverage and/or for each underground storage tank or location], exclusive of legal defense costs, which are subject to a separate limit under the policy. This coverage is provided under [policy number]. The effective date of said policy is [date].

2. The ["Insurer" or "Pool"] further certifies the following with respect to the insurance described in Paragraph 1:

a. Bankruptcy or insolvency of the insured shall not relieve the ["Insurer" or "Pool"] of its obligations under the policy to which this certificate applies.

b. The ["Insurer" or "Pool"] is liable for the payment of amounts within any deductible applicable to the policy to the provider of corrective action or a damaged third party, with a right of reimbursement by the insured for any such payment made by the ["Insurer" or "Pool"]. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated under another mechanism or

combination of mechanisms as specified in 9 VAC 25-590-60 through 9 VAC 25-590-110.

c. Whenever requested by the State Water Control Board, the ["Insurer" or "Pool"] agrees to furnish to the State Water Control Board a signed duplicate original of the policy and all endorsements.

d. Cancellation or any other termination of the insurance by the ["Insurer" or "Pool"], except for nonpayment of premium or misrepresentation by the insured, will be effective only upon written notice and only after the expiration of 60 days after a copy of such written notice is received by the insured. Cancellation for nonpayment of premium or misrepresentation by the insured will be effective only upon written notice and only after expiration of a minimum of 15 days after a copy of such written notice is received by the insured.

[Insert for claims-made policies]

e. The insurance covers claims otherwise covered by the policy that are reported to the ["Insurer" or "Pool"] within six months of the effective date of cancellation or nonrenewal of the policy except where the new or renewed policy has the same retroactive date or a retroactive date earlier than that of the prior policy, and which arise out of any covered occurrence that commenced after the policy retroactive date, if applicable, and prior to such policy renewal or termination date. Claims reported during such extended reporting period are subject to the terms, conditions, limits, including limits of liability, and exclusions of the policy.

I hereby certify that the wording of this instrument is identical to the wording in APPENDIX IV of 9 VAC 25-590-10 et seq. and that the ["Insurer" or "Pool"] is ["licensed to transact the business of insurance, or eligible to provide insurance as an excess or approved surplus lines insurer, in the Commonwealth of Virginia"].

[Signature of authorized representative of Insurer]

[Type name] [Title], Authorized Representative of [name of Insurer or Group Self Insurance Pool]

[Address of Representative]

## APPENDIX V

### PERFORMANCE BOND

[NOTE: The instructions in brackets are to be replaced by the relevant information and the brackets deleted.]

Date bond executed:

Period of coverage:

Principal: [legal name and business address of owner or operator.]

Type of organization: [insert "individual" "joint venture," "partnership," or "corporation"]

State of incorporation (if applicable):

Surety(ies): [name(s) and business address(es)]

Scope of coverage: [List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to 9 VAC 25-580-70 (Underground Storage Tanks: Technical Standards and Corrective Action Requirements), and the name and address of the facility. List the coverage guaranteed by the bond: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases" "arising from operating the underground storage tank"].

Penal sums of bond:

Corrective Action (per occurrence) \$.....

Third Party Liability (per occurrence) \$.....

Annual aggregate \$.....

Surety's bond number: .....

Know all Persons by These Presents, that we, the principal and Surety(ies), hereto are firmly bound to the State Water Control Board of the Commonwealth of Virginia, in the above penal sums for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where the Surety(ies) are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sums jointly and severally only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each surety binds itself, jointly and severally with the Principal, for the payment of such sums only as is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sums.

Whereas said Principal is required under §62.1-44.34:8 through §62.1-44.34:12 of the Code of Virginia, Subtitle I of the Resource Conservation and Recovery Act (RCRA), as amended, and under the Virginia Petroleum Underground Storage Tank Financial Requirements Regulation (9 VAC 25-590-10 et seq.), to provide financial assurance for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the underground storage tanks identified above, and

Whereas said Principal shall establish a standby trust fund as is required when a surety bond is used to provide such financial assurance;

Now, therefore, the conditions of the obligation are such that if the Principal shall faithfully ["take corrective action, in accordance with Part VI of 9 VAC 25-580-230 through 25-580-300. (Underground Storage Tanks: Technical Standards and Corrective Action Requirements) and the State Water Control Board's instructions for," and/or "compensate injured third parties for bodily injury and property damage caused by" either "sudden" or "nonsudden" or "sudden and nonsudden"] accidental releases arising from operating the tank(s) identified above, or if the Principal shall provide alternate financial assurance, as specified in 9 VAC 25-590-10 et seq., within 120 days after the date the notice of cancellation is received by the Principal from the Surety(ies), then this obligation shall be null and void; otherwise it is to remain in full force and effect.

Such obligation does not apply to any of the following:

- (a) Any obligation of [insert owner or operator] under a workers compensation, disability benefits, or unemployment compensation law or other similar law;
- (b) Bodily injury to an employee of [insert owner or operator] arising from, and in the course of, employment by [insert owner or operator];
- (c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;
- (d) Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by [insert owner or operator] that is not the direct result of a release from a petroleum underground storage tank;
- (e) Bodily injury or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 9 VAC 25-590-40.

The Surety(ies) shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above.

Upon notification by the State Water Control Board that the Principal has failed to ["take corrective action, in accordance with Part VI of 9 VAC 25-580-230 through 25-580-300 and the State Water Control Board's instructions," and/or "compensate injured third parties"] as guaranteed by this bond, the Surety(ies) shall either perform ["corrective action in, accordance with 9 VAC 25-580-10 et seq. and the board's instructions," and/or "third party liability compensation"] or place funds in an amount up to the annual aggregate penal sum into the standby trust fund as directed by the State Water Control Board under 9 VAC 25-590-170.

Upon notification by the State Water Control Board that the Principal has failed to provide alternate financial assurance within 60 days after the date the notice of cancellation is received by the Principal from the Surety(ies) and that the State Water Control Board has determined or suspects that a release has occurred, the Surety(ies) shall place funds in an amount not exceeding the annual aggregate penal sum into the standby trust fund as directed by the State Water Control Board under 9 VAC 25-590-170.

The Surety(ies) hereby waive(s) notification of amendments to applicable laws, statutes, rules, and regulations and agrees that no such amendment shall in any way alleviate its (their) obligation on this bond.

The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the annual aggregate to the penal sum shown on the face of the

bond, but in no event shall the obligation of the Surety(ies) hereunder exceed the amount of said annual aggregate penal sum.

The Surety(ies) may cancel the bond by sending notice of cancellation by certified mail to the principal, provided, however, that cancellation shall not occur during the 120 days beginning on the date of receipt of the notice of cancellation by the principal, as evidenced by the return receipt.

The Principal may terminate this bond by sending written notice to the Surety(ies).

In Witness Whereof, the Principal and Surety(ies) have executed this Bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies) and that the wording of this surety bond is identical to the wording specified in Appendix V of 9 VAC 25-590-10 et seq. as such regulations were constituted on the date this bond was executed.

#### PRINCIPAL

[Signature(s)]

[Name(s)]

[Title(s)]

[Corporate seal]

#### CORPORATE SURETY(IES)

[Name and address]

State of Incorporation:.....

Liability: \$ . . .

[Signature(s)]

[Name(s) and title(s)]

[Corporate seal]

[For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for surety above.]

Bond premium: \$\_\_\_\_\_

## APPENDIX VI

### IRREVOCABLE STANDBY LETTER OF CREDIT

[NOTE: The instructions in brackets are to be replaced by the relevant information and the brackets deleted.]

[Name and address of issuing institution]

[Name and address of the Executive Director of the State Water Control Board of the Commonwealth of Virginia and Director(s) of other state implementing agency(ies)]

Dear Sir or Madam: We hereby establish our Irrevocable Standby Letter of Credit No. . . . . in your favor, at the request and for the account of [owner or operator name] of [address] up to the aggregate amount of [in words] U.S. dollars (\$[insert dollar amount]), available upon presentation [insert, if more than one director of a state implementing agency is a beneficiary, "by any one of you"] of

(1) your sight draft, bearing reference to this letter of credit, No. . . . and

(2) your signed statement reading as follows: "I certify that the amount of the draft is payable pursuant to regulations issued under authority of §§ 62.1-44.34:8 through 62.1-44.34:12 of the Code of Virginia and Subtitle I of the Resource Conservation and Recovery Act of 1976, as amended."

This letter of credit may be drawn on to cover [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"] arising from operating the underground storage tank(s) identified below in the amount of [in words] \$ [insert dollar amount] per occurrence and [in words] \$ [insert dollar amount] annual aggregate:

[List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to 9 VAC 25-580-70 (Underground Storage Tanks: Technical Standards and Corrective Action Requirements), and the name and address of the facility.]

The letter of credit may not be drawn on to cover any of the following:

- (a) Any obligation, of [insert owner or operator] under a workers compensation, disability benefits, or unemployment compensation law or other similar law;
- (b) Bodily injury to an employee of [insert owner or operator] arising from, and in the course of, employment by [insert owner or operator];
- (c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;
- (d) Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by [insert owner or operator] that is not the direct result of a release from a petroleum underground storage tank;
- (e) Bodily injury or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 9 VAC 25-590-40 (Virginia Petroleum Underground Storage Tank Financial Responsibility Requirements).

This letter of credit is effective as of [date] and shall expire on [date], but such expiration date shall be automatically extended for a period of [at least the length of the original term] on [expiration date] and on each successive expiration date, unless, at least 120 days before the current expiration date, we notify [owner or operator] by certified mail that we have decided not to extend this letter of credit beyond the current



expiration date. In the event that [owner or operator] is so notified, any unused portion of the credit shall be available upon presentation of your sight draft for 120 days after the date of receipt by [owner or operator], as shown on the signed return receipt.

Whenever this letter of credit is drawn on under and in compliance with the terms of this credit, we shall duly honor such draft upon presentation to us, and we shall deposit the amount of the draft directly into the standby trust fund of [owner or operator] in accordance with your instructions.

We certify that the wording of this letter of credit is identical to the wording specified in Appendix VI of 9 VAC 25-590-10 et seq. as such regulations were constituted on the date shown immediately below.

[Signature(s) and title(s) of official(s) of issuing institution]

[Date]

This credit is subject to [insert "the most recent edition of the Uniform Customs and Practice for Documentary Credits, published and copyrighted by the International Chamber of Commerce," or "the Uniform Commercial Code"]

## APPENDIX VII

### TRUST AGREEMENT

[NOTE: The instructions in brackets are to be replaced by the relevant information and the brackets deleted.]

Trust agreement, the "Agreement," entered into as of [date] by and between [name of the owner or operator], a [name of state] [insert "corporation," "partnership," "association," or "proprietorship"], the "Grantor," and [name of corporate trustee], [insert "Incorporated in the state of . . . . " or "a national bank"], the "Trustee."

Whereas, the State Water Control Board of the Commonwealth of Virginia has established certain regulations applicable to the Grantor, requiring that an owner or operator of an underground storage tank shall provide assurance that funds will be available when needed for corrective action and third party compensation for bodily injury and property damage caused by sudden and nonsudden accidental releases arising from the operation of the underground storage tank. The attached Schedule A lists the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located that are covered by the standby trust agreement.

Whereas, the Grantor has elected to establish [insert either "a guarantee," "surety bond," or "letter of credit"] to provide all or part of such financial assurance for the underground storage tanks identified herein and is required to establish a standby trust fund able to accept payments from the instrument (This paragraph is only applicable to the standby trust agreement.);

Whereas, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this agreement, and the Trustee is willing to act as trustee;

Now, therefore, the Grantor and the Trustee agree as follows:

#### Section 1. Definitions. As used in this Agreement:

- (a) The term "Grantor" means the owner or operator who enters into this Agreement and any successors or assigns of the Grantor.
- (b) The term "Trustee" means the Trustee who enters into this Agreement and any successor Trustee.
- (c) "9 VAC 25-590-10 et seq." is the Petroleum Underground Storage Tank Financial Requirements Regulation promulgated by the State Water Control Board for the Commonwealth of Virginia.

#### Section 2. Identification of the Financial Assurance Mechanism.

This Agreement pertains to the [identify the financial assurance mechanism, either a guarantee, surety bond, or letter of credit, from which the standby trust fund is established to receive payments (This paragraph is only applicable to the standby trust agreement.)].

#### Section 3. Establishment of Fund.

The Grantor and the Trustee hereby establish a trust fund, the "Fund," for the benefit of the State Water Control Board of the Commonwealth of Virginia. The Grantor and the Trustee intend that no third party have access to the Fund except as herein provided. [The Fund is established initially as a standby to receive payments and shall not consist of any property.] Payments made by the provider of financial assurance pursuant to the State Water Control Board's instruction are transferred to the Trustee

and are referred to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the Grantor as provider of financial assurance, any payments necessary to discharge any liability of the Grantor established by the State Water Control Board.

#### Section 4. Payment for ["Corrective Action" and/or "Third Party Liability Claims"].

The Trustee shall make payments from the Fund as the State Water Control Board shall direct, in writing, to provide for the payment of the costs of [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"] arising from operating the tanks covered by the financial assurance mechanism identified in this Agreement.

The Fund may not be drawn upon to cover any of the following:

- (a) Any obligation of [insert owner or operator] under a workers compensation, disability benefits, or unemployment compensation law or other similar law;
- (b) Bodily injury to an employee of [insert owner or operator] arising from, and in the course of, employment by [insert owner or operator];
- (c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;
- (d) Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by [insert owner or operator] that is not the direct result of a release from a petroleum underground storage tank;
- (e) Bodily injury or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 9 VAC 25-590-40.

The Trustee shall reimburse the Grantor, or other persons as specified by the State Water Control Board, from the Fund for corrective action expenditures and/or third party liability claims in such amounts as the State Water Control Board shall direct in writing. In addition, the Trustee shall refund to the Grantor such amounts as the State Water Control Board specifies in writing. Upon refund, such funds shall no longer constitute part of the Fund as defined here.

#### Section 5. Payments Comprising the Fund.

Payments made to the Trustee for the Fund shall consist of cash and securities acceptable to the Trustee.

#### Section 6. Trustee Management.

The Trustee shall invest and reinvest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge his duties with respect to the trust fund solely in the interest of the beneficiaries and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims, except that:

- (i) Securities or other obligations of the Grantor, or any other owner or operator of the tanks, or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 USC §80a-2(a), shall not be acquired or held, unless they are securities or other obligations of the federal or a state government;
- (ii) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the federal or state government; and
- (iii) The Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

#### Section 7. Commingling and Investment.

The Trustee is expressly authorized in its discretion:

- (a) To transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and
- (b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 USC § 80a-1 et seq., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

#### Section 8. Express Powers of Trustee.

Without in any way limiting the powers and discretions conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

- (a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the Trustee shall be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;
- (b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;
- (c) To register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;
- (d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the federal or state government; and
- (e) To compromise or otherwise adjust all claims in favor of or against the Fund.

#### Section 9. Taxes and Expenses.

All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee shall be paid from the Fund.

#### Section 10. Advice of Counsel.

The Trustee may from time to time consult with counsel, who may be counsel to the Grantor, with respect to any questions arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

#### Section 11. Trustee Compensation.

The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the Grantor.

#### Section 12. Successor Trustee.

The Trustee may resign or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor trustee and this successor accepts the appointment. The successor trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee shall specify the date on which it assumes administration of the trust in writing sent to the Grantor and the present Trustee by certified mail 10 days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this Section shall be paid as provided in Section 9.

#### Section 13. Instructions to the Trustee.

All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are designated in the attached Schedule B or such other designees as the Grantor may designate by amendment to Schedule B. The trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. All orders, requests and instructions by the State Water Control Board to the Trustee shall be in writing, signed by the Executive Director of the State Water Control Board, and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor or the State Water Control Board hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or the State Water Control Board, except as provided for herein.

#### Section 14. Amendment of Agreement.

This Agreement may be amended by an instrument in writing executed by the Grantor and the Trustee, or by the Trustee and the State Water Control Board if the Grantor ceases to exist.

#### Section 15. Irrevocability and Termination.

Subject to the right of the parties to amend this Agreement as provided in Section 14, this Trust shall be irrevocable and shall continue until terminated at the written direction of the Grantor and the Trustee, or by the Trustee and the State Water Control Board, if the Grantor ceases to exist. Upon termination of the Trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor.

#### Section 16. Immunity and Indemnification.

The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any directions by the Grantor or the State Water Control Board issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

#### Section 17. Choice of Law.

This Agreement shall be administered, construed, and enforced according to the laws of the Commonwealth of Virginia, or the Comptroller of the Currency in the case of National Association banks.

#### Section 18. Interpretation.

As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement.

In Witness whereof the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals (if applicable) to be hereunto affixed and attested as of the date first above written. The parties below certify that the wording of this Agreement is identical to the wording specified in Appendix VII of 9 VAC 25-590-10 et seq. as such regulations were constituted on the date written above.

[Signature of Grantor]

[Name of the Grantor]

[Title]

Attest:

[Signature of Trustee]

[Name of the Trustee]

[Title]

[Seal]

[Signature of Witness]

[Name of Witness]

[Title]

[Seal]

**APPENDIX VIII**  
**CERTIFICATION OF ACKNOWLEDGMENT**

[Note: The instructions in brackets are to be replaced by the relevant information and the brackets deleted.]

State of . . . .

County of . . . .

On this [date], before me personally came [owner or operator] to me known, who, being by me duly sworn, did depose and say that she/he resides at [address], that she/he is [title] of [corporation], the corporation described in and which executed the above instrument; that she/he knows the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation; and that she/he signed her/his name thereto by like order.

[Signature of Notary Public]

[Name of Notary Public]

My Commission expires:

## APPENDIX IX.

### CERTIFICATION OF FINANCIAL RESPONSIBILITY

[Note: The instructions in brackets are to be replaced by the relevant information and the brackets deleted.]

[Owner or operator] hereby certifies that it is in compliance with the requirements of 9 VAC 25-590-10 et seq. (Petroleum Underground Storage Tank Financial Requirements Regulation).

The financial assurance mechanism[s] used to demonstrate financial responsibility under 9 VAC 25-590-10 et seq. is [are] as follows:

Indicate type of Mechanism (Note: the Fund may not be used as the sole mechanism):

- ☐ Virginia Petroleum Storage Tank Fund ("the Fund")
- ☐ Letter from Chief Financial Officer
- ☐ Guarantee
- ☐ Insurance Endorsement or Certificate
- ☐ Letter of Credit
- ☐ Surety Bond
- ☐ Trust Fund

Name of Issuer (for mechanism other than the Fund):

Mechanism Number (if applicable): \_\_\_\_\_

Amount of coverage for mechanism other than the Fund:

\$ \_\_\_\_\_ corrective action per occurrence

\$ \_\_\_\_\_ third party liability per occurrence

\$ \_\_\_\_\_ annual aggregate

Amount of coverage under Virginia Petroleum Storage Tank Fund:

\$ \_\_\_\_\_ per occurrence and \$ \_\_\_\_\_ annual aggregate

Effective period of coverage: \_\_\_\_\_ to \_\_\_\_\_

Do(es) mechanism(s) cover(s): taking corrective action and/or compensating third parties for bodily injury and property damage caused by either sudden accidental releases or nonsudden accidental releases or accidental releases? \_\_\_\_ Yes \_\_\_\_ No

If "No," specify in the following space the items the mechanism covers:

[Signature of owner or operator]

[Name of owner or operator] [Title] [Date]

[Signature of notary]

[Name of notary] [Date] My Commission expires:



## APPENDIX XI

### LETTER FROM CHIEF FINANCIAL OFFICER (SHORT FORM)

[Note: This Appendix may only be used by owners or operators who do not own or operate hazardous waste facilities or underground injection control wells.]

[Note: The instructions in brackets are to be replaced by the relevant information and the brackets deleted.]

I am the chief financial officer of [insert: name and address of the owner or operator or guarantor]. This letter is in support of the use of [insert "the financial test of self-insurance" and/or "Guarantee"] to demonstrate financial responsibility for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage"] caused by [insert "sudden accidental releases" and/or "nonsudden accidental releases"] in the amount of at least [insert dollar amount] per occurrence and [insert dollar amount] annual aggregate arising from operating (an) underground storage tank(s).

Underground storage tanks at the following facilities are assured by this financial test by this [insert "owner or operator" and/or "guarantor"]: [List for each facility the name and address of the facility where tanks assured by this financial test are located and whether tanks are assured by this financial test. If separate mechanisms or combinations of mechanisms are being used to assure any of the tanks at this facility, list each tank assured by this financial test by the tank identification number provided in the notification submitted pursuant to 9 VAC 25-580-70 (Underground Storage Tanks: Technical Standards and Corrective Action Requirements)].

I am not required to demonstrate evidence of financial responsibility for any other EPA regulation or state programs authorized by EPA.

This [insert "owner or operator" or "guarantor"] has not received an adverse opinion, a disclaimer of opinion, or a "going concern" qualification from an independent auditor on the financial statements for the latest completed financial reporting year.

[Fill in the information below to demonstrate compliance with the financial test requirements.]

1. Amount of annual UST aggregate coverage being assured by a financial test, and/or guarantee: \$\_\_\_\_\_
2. Total tangible assets: \$\_\_\_\_\_
3. Total liabilities [if any of the amount reported on line 1 is included in total liabilities, you may deduct that amount from this line or add that amount to line 4] \$\_\_\_\_\_
4. Tangible net worth [subtract line 3 from line 2] \$\_\_\_\_\_
5. Is line 4 at least equal to line 1 above? Yes\_\_\_ No\_\_\_
6. Have financial statements for the latest financial reporting year been filed with the Securities and Exchange Commission? Yes\_\_\_ No\_\_\_
7. Have financial statements for the latest financial reporting year been filed with the Energy Information Administration? Yes\_\_\_ No\_\_\_
8. Have financial statements for the latest financial reporting year been filed with the Rural Electrification Administration? Yes\_\_\_ No\_\_\_
9. Has financial information been provided to Dun and Bradstreet, and has Dun and Bradstreet provided a financial strength rating at least equal to the amount of annual UST aggregate coverage being assured according to the table below?

Annual Aggregate Requirement	Dun and Bradstreet Rating
\$20,000	EE (\$20,000 - \$34,999)
\$40,000	DC (\$50,000-\$74,999)
\$80,000	CB (\$125,000 - \$199,999)
\$150,000	BB(\$200,000 - \$299,999)
\$200,000	BB (\$200,000 – \$299,999)

[Answer "Yes" only if BOTH criteria have been met.] Yes\_\_\_ No\_\_\_

10. If you did not answer yes to one of lines 6 through 9, please attach a report from a certified public accountant certifying that there are no material differences between the data reported in lines 2 through 5 above and the financial statements for the latest financial reporting year.

I hereby certify that the wording of this letter is identical to the wording specified in Appendix XI of this chapter as such regulations were constituted on the date shown immediately below.

[Signature]

[Name]

[Title]

[Date]

## APPENDIX XII

NOW COMES \_\_\_\_\_, who being duly sworn,  
(Name of UST Owner/Operator)

I, \_\_\_\_\_ of  
(Name of UST Owner/Operator)

\_\_\_\_\_  
(Address) declare that:

The number of gallons pumped from \_\_\_\_\_ to \_\_\_\_\_  
(Start Date)

to \_\_\_\_\_ through all regulated underground storage tanks which  
(End Date)

this UST owner/operator owns and operates in the Commonwealth of Virginia was \_\_\_\_\_.

(Number of Gallons)

I swear that the declarations in the proceeding affidavit are true to the best of my knowledge and belief.

(Print Name of UST Owner/Operator)

By: \_\_\_\_\_  
(Signature)

THE FOLLOWING MUST BE COMPLETED BY A NOTARY PUBLIC

Commonwealth of Virginia )  
 ) ss:

City/County of \_\_\_\_\_)

Subscribed and sworn to before me by \_\_\_\_\_  
(Name of UST Owner/Operator)

this \_\_\_\_\_ day of \_\_\_\_\_, 2000.

(Notary Public)

My Commission Expires: \_\_\_\_\_



## **FINANCIAL RESPONSIBILITY DEMONSTRATION REQUIREMENTS FOR LOCAL GOVERNMENTS**

The following summary presents an overview of the Virginia Petroleum Storage Tank Financial Responsibility Requirements Regulation, 9 VAC 25-590-10 *et seq.*, (the Financial Regulation), which incorporates by reference certain regulations of the United States Environmental Protection Agency set forth in part 280 of title 40 of the Code of Federal Regulations (40 C.F.R. Part 280). For exact requirements, please consult the regulations.

### **INTRODUCTION**

Under federal law owners and operators of certain underground storage tanks (USTs) must demonstrate their ability to pay for cleanup and third party damages in the event of contamination. The required annual aggregate assurance amount is \$1 million for owners with 100 or more USTs and \$2 million for owners with more than 100 USTs.

The Virginia Petroleum Storage Tank Fund (Fund) was created to assist Virginia's UST owners and operators in meeting the federal assurance requirements. The Fund may be used by owners and operators to meet the majority of the assurance requirement, with the owners and operators being responsible for demonstrating their financial responsibility for a small portion of the requirement.

### **WHO MUST DEMONSTRATE FINANCIAL RESPONSIBILITY**

Owners and operators of regulated USTs in use on November 8, 1984 or brought into use after that date must comply with 9 VAC 25-590-10 *et seq.* For the purposes of 9 VAC 25-590-10 *et seq.* a regulated UST is one that contains petroleum and petroleum-based substances, such as motor and jet fuels, fuel oils, lubricants, petroleum solvents and used oils. USTs not subject to financial responsibility demonstration requirements include (1) USTs that store heating oil which is consumed on the premises where stored and (2) farm or residential USTs with a capacity of 1,100 gallons or less that store motor fuel for noncommercial uses.

### **COMPLIANCE DEADLINE FOR LOCAL GOVERNMENT ENTITIES**

Local government entities must have their financial responsibility demonstration mechanism in place no later than February 18, 1994. Thereafter, the financial responsibility demonstration mechanism must be renewed annually.

### **CALCULATING THE APPLICABLE FINANCIAL RESPONSIBILITY AMOUNT**

Local governments that own or operate regulated USTs must maintain evidence of financial responsibility on a sliding scale that is based on the number of gallons pumped through all regulated USTs owned and/or operated in Virginia by that local government. The following table contains the financial responsibility requirements that correspond to the total annual gallonage pumped through all regulated petroleum USTs in Virginia which are owned or operated by the local government:

Annual Throughput (Gallons)	Corrective Action Per Occurrence	Third Party Liability	Annual Aggregate
600,000 or less	\$5,000	\$15,000	\$20,000
600,001 - 1.2M	\$10,000	\$30,000	\$40,000
1,200,001 - 1.8M	\$20,000	\$60,000	\$80,000
1,800,001 - 2.4M	\$30,000	\$120,000	\$150,000
Above 2.4M	\$50,000	\$150,000	\$200,000

Please note that if the owner and operator are separate entities, either may demonstrate financial responsibility; however, both entities are liable in the event of noncompliance. The entity that is demonstrating provides the financial assurance according to its annual throughput.

Also note that if an owner or operator uses separate mechanisms or separate combinations of mechanisms to demonstrate financial responsibility for different USTs, the annual aggregate shall be \$200,000.

The attached affidavits must be used to document total annual gallonage at the time the assurance mechanism is established. To accommodate differences in fiscal year end dates, the annual period for which throughput must be reported is any consecutive twelve month period occurring in the two year period preceding the date of the demonstration mechanism.

The Fund serves as a second mechanism to meet the annual aggregate financial responsibility requirements beyond the per occurrence and annual aggregate amounts specified for each owner or operator under the preceding sliding scale.

## **METHODS TO DEMONSTRATE FINANCIAL RESPONSIBILITY**

In order to demonstrate financial responsibility, the owner or operator must determine the sliding scale amount for which it must demonstrate and complete either one mechanism or a combination of the assurance mechanisms prescribed by the Financial Regulation. Whether the owner or operator may use a particular mechanism depends upon the requirements set out in the Financial Regulation for that mechanism. A separate handout entitled "Inspection Notice Supplement: Financial Responsibility for USTs" describes the mechanisms that may be used by both private and local government entities, provided that the specific requirements for the use of the mechanism are met. The following table shows additional mechanisms that may be used solely by local government entities and the appendix number to this handout in which the particular mechanism appears.

The mechanisms themselves are the documents that appear either in the appendices to the

Financial Regulation or the appendices to this handout. Once the owner or operator selects the mechanism(s) it wishes to use, then the language of the mechanism must appear **exactly** as it does in the appropriate appendix, except that instructions appearing in brackets inside the mechanism are to be replaced with the relevant information and the brackets deleted.

<b>Local Government Financial Responsibility Demonstration Mechanism</b>	<b>Appendix Number</b>
General purpose local government bond rating test	A (Also complete Appendix I)
Non-general purpose local government bond rating test	B (Also complete Appendix I)
Worksheet Test (or Financial Test)	C (Also complete Appendix I)
Local Government Guarantee with Standby Trust Made by State	D (Also complete Appendix I)
Local Government Guarantee with Standby Trust Made by a Local Government	E (Entity also must complete Appendix I and Guarantor must complete either Appendix A, B, C or H)
Local Government Guarantee Without Standby Trust Made by a State	F (Also complete Appendix I)
Local Government Guarantee Without Standby Trust Made by a Local Government	G (Entity also must complete Appendix I and Guarantor must complete either Appendix A, B, C or H)
Local Government Fund	H (Also complete appendix I)

## **REQUIREMENTS FOR THE USE OF EACH LOCAL GOVERNMENT FINANCIAL RESPONSIBILITY DEMONSTRATION MECHANISM**

### **General Purpose Local Government Bond Rating Test**

In order to use this mechanism, the general purpose local government entity or the local government guarantor must:

1. Have currently outstanding an issue or issues of general obligation bonds of \$1 million or more, excluding refunded obligations, with a Moody's rating of Aaa, Aa, A or Baa, or a Standard & Poor's rating of AAA, AA, A, or BBB.
2. Where there are multiple outstanding issues, or where the bonds are rated by both Moody's and Standard & Poor's, the lowest rating must be used to determine eligibility.

3. Bonds backed by credit enhancement other than municipal bond insurance may not be considered.

### **Non-general Purpose Local Government Bond Rating Test**

In order to use this mechanism, the non-general purpose local government entity or the non-general purpose local government guarantor must:

1. Have currently outstanding an issue or issues of revenue bonds of \$1 million or more, excluding refunded issues and have a Moody's rating of Aaa, Aa, A or Baa or a Standard & Poor's rating of AAA, AA, A or BBB as the lowest rating for any rated revenue bond issued by the local government.

2. Where bonds are rated by both Moody's and Standard & Poor's, the lower rating for each bond must be used to determine eligibility.

3. Bonds backed by credit enhancement may not be considered.

### **Worksheet or Financial Test**

To use this mechanism, the local government or local government guarantor must:

1. Have the ability and authority to assess and levy taxes or to freely establish fees and charges.

2. Have no outstanding issues of general obligation or revenue bonds that are rated as less than investment grade.

3. If the local government's year-end financial statements are independently audited, there may not be an adverse auditor's opinion or a disclaimer of opinion.

4. Have the following information available, as shown in the year-end financial statements for the latest completed fiscal year: (i) Total Revenues<sup>1</sup>; (ii) Total Expenditures<sup>2</sup>;

---

1 Consists of the sum of general fund operating and non-operating revenues including net local taxes, licenses and permits, fines and forfeitures, revenues from use of money and property, charges for services, investment earnings, sales (property, publications, etc.), intergovernmental revenues (restricted and unrestricted), and total revenues from all other governmental funds including enterprise, debt service, capital projects and special revenues, but excluding revenues to funds held in a trust or agency capacity. For purposes of this test, exclude interfund transfers where the funds are under the control of the local government using this test, liquidation of investments and issuance of debt.

2 Consists of the sum of general fund operating and non-operating expenditures including public safety, public utilities, transportation, public works, environmental protection, cultural and recreational, community development, revenue sharing, employee benefits and



(iii) Local Revenues<sup>3</sup>; (iv) Debt Service<sup>4</sup>; (v) Total Funds<sup>5</sup>; and (vi) Population<sup>6</sup>.

### **Local Government Guarantee**

To use this mechanism:

1. The guarantor must be either the state in which the local government is located or a local government having a "substantial government relationship" with the owner or operator and the guarantee must be issued incident to that relationship.
2. If the guarantor is a local government, it must demonstrate that it meets either the bond rating test requirements, the worksheet test requirements or the local government fund requirements.

### **Local Government Fund**

To use this mechanism:

1. The fund must be dedicated by state constitutional provision, or local government statute, charter, ordinance or order to pay for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of petroleum USTs and must be funded for the full amount of coverage required by the sliding scale shown above or funded for part of the required amount of coverage and used in combination with other mechanism(s) that provide the balance of the coverage; **OR**

---

compensation, office management, planning and zoning, capital projects, interest payments on debt, payments for retirement of debt principal, and total expenditures from all other governmental funds including enterprise, debt service, capital projects and special revenues. Exclude interfund transfers where the funds are under the direct control of the local government using this test.

3 Consists of Total Revenues minus the sum of all transfers from other governmental entities, including all monies received from Federal, state or local government sources.

4 Consists of the sum of all interest and principal payments on all long-term credit obligations and all interest-bearing short-term credit obligations. Includes interest and principal payment on general obligation bonds, revenue bonds, notes, mortgages, judgments and interest bearing warrants. Excludes payments on non-interest-bearing short-term obligations, interfund obligations, amounts owed in a trust or agency capacity and advances and contingent loans from other governments.

5 Consists of the sum of cash and investment securities from all funds, including general, enterprise, debt service, capital projects, and special revenue funds, but excluding employee retirement funds, at the end of the local government's financial reporting year. Includes Federal securities, Federal agency securities, state and local government securities, and other securities such as bonds, notes and mortgages. Excludes agency funds, private trust funds, accounts receivable, value of real property and other non-security assets.

6 Consists of the number of people in the area served by the local government.

2. The fund must be dedicated by state constitutional provision or local government statute, charter, ordinance or order as a contingency fund for general emergencies, including taking corrective action and compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of petroleum UST(s), and must be funded for five times the full amount of coverage required under the sliding scale shown above, or funded for part of the required amount of coverage and used in combination with other mechanisms that provide the remaining coverage. If the fund is funded for less than five times the amount of coverage required, the amount of financial responsibility demonstrated by the fund may not exceed one-fifth the amount in the fund; **OR**

3. The fund must be dedicated by state constitutional provision, or local government statute, charter, ordinance or order to pay for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of petroleum UST(s). A payment must be made to the fund once every year for seven years (the "pay-in-period") until the fund is fully-funded. The amount of each payment must be determined by dividing the difference of the total financial responsibility requirement less the current amount in the fund by the number of years left in the pay-in-period ( $[\text{Total Requirement} - \text{Current Funding}] / \text{Years Remaining}$ ); **AND**

a. The local government must have available bonding authority, approved through voter referendum (if such approval is necessary prior to the issuance of the bonds), for an amount equal to the difference between the required amount of coverage and the amount held in the dedicated fund. This bonding authority must be available for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of petroleum USTs, **OR**

b. The local government must have a letter signed by the state attorney general stating that the use of the bonding authority will not increase the local government's debt beyond the legal debt ceilings established by the relevant state laws. The letter also must state that prior voter approval is not necessary before use of the bonding authority.

### **RECORDKEEPING REQUIREMENTS**

Owners and operators must keep the financial assurance mechanism at the UST site or at the place of work of the owner or operator. All owners and operators who have regulated USTs which have not been closed pursuant to the requirements of Virginia Regulation 9 VAC 25-580-10 *et seq.* must demonstrate financial responsibility.

### **REPORTING REQUIREMENTS**

An owner or operator is required to submit the documents demonstrating its financial responsibility to DEQ only in certain circumstances. Specifically, the financial assurance mechanism(s) must be submitted: (1) within 30 days after confirmation of a release from a UST; (2) within 30 days after the owner or operator receives notice of that the assurance provider has been named debtor in a

bankruptcy proceeding or has had its authority to issue the assurance mechanism revoked or suspended, or experiences any other incapacity; (3) if the provider of assurance is a guarantor, within 30 days after the owner or operator receives notice that the guarantor fails to meet the financial test requirements; (4) within 10 days if the owner or operator fails to obtain alternate assurance within 150 days of finding that it no longer meets the requirements of the financial test or within 30 days of notification by the DEQ that it no longer meets the financial test requirements; (5) immediately if a provider of assurance cancels or fails to renew the assurance mechanism(s) and the owner or operator fails to obtain alternate coverage within 60 days of the notice of termination or nonrenewal; (6) within 10 days after the commencement of any bankruptcy proceeding naming the owner or operator as debtor; or (7) at any time the DEQ requests the documents.

### **REIMBURSEMENT OF CORRECTIVE ACTION COSTS**

In addition to assisting Virginia's UST owners and operators in meeting their federal financial responsibility requirements, the Fund also was created to reimburse owners and operators for the reasonable and necessary costs in excess of their financial responsibility requirement for corrective action resulting from contamination caused by their USTs. More detailed information about reimbursement of corrective action costs from the Fund and reimbursement application forms may be obtained by calling DEQ Customer Service at (804) 698-4358.

If you have any questions regarding preparation of your financial responsibility demonstration mechanism, please call Cara Kail at (804) 698-4053.

## APPENDIX A

### Letter from Chief Financial Officer

I am the chief financial officer of [insert: name and address of local government owner or operator, or guarantor]. This letter is in support of the use of the bond rating test to demonstrate financial responsibility for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage"] caused by [insert: "sudden accidental releases" and/or "nonsudden accidental releases"] in the amount of at least [insert: dollar amount] per occurrence and [insert: dollar amount] annual aggregate arising from operating (an) underground storage tank(s).

Underground storage tanks at the following facilities are assured by this bond rating test: [List for each facility: the name and address of the facility where tanks are assured by the bond rating test].

The details of the issue date, maturity, outstanding amount, bond rating, and bond rating agency of all outstanding bond issues that are being used by [name of local government owner or operator, or guarantor] to demonstrate financial responsibility are as follows: [complete table]

Issue Date	Maturity Date	Outstanding Amount	Bond Rating	Rating Agency
---------------	------------------	-----------------------	----------------	---------------

[Moody's or Standard & Poor's]

The total outstanding obligation of [insert amount], excluding refunded bond issues, exceeds the minimum amount of \$1 million. All outstanding general obligation bonds issued by this government that have been rated by Moody's or Standard & Poor's are rated as at least investment grade (Moody's Baa or Standard & Poor's BBB) based on the most recent ratings published within the last 12 months. Neither rating service has provided notification within the last 12 months of downgrading of bond ratings below investment grade or of withdrawal of bond rating other than for repayment of outstanding bond issues.

I hereby certify that the wording of this letter is identical to the wording specified in 40 CFR Part 280.104(d) as such regulations were constituted on the date shown immediately below.

[Date]\_\_\_\_\_

[Signature]\_\_\_\_\_

[Name]\_\_\_\_\_

[Title]\_\_\_\_\_

## APPENDIX B

### Letter from Chief Financial Officer

I am the chief financial officer of [insert: name and address of local government owner or operator, or guarantor]. This letter is in support of the use of the bond rating test to demonstrate financial responsibility for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage"] caused by [insert: "sudden accidental releases" and/or "nonsudden accidental releases"] in the amount of at least [insert: dollar amount] per occurrence and [insert dollar amount] annual aggregate arising from operating (an) underground storage tank(s). This local government is not organized to provide general governmental services and does not have the legal authority under state law or constitutional provisions to issue general obligation debt.

Underground storage tanks at the following facilities are assured by this bond rating test: [List for each facility: the name and address of the facility where tanks are assured by the bond rating test].

The details of the issue date, maturity, outstanding amount, bond rating, and bond rating agency of all outstanding revenue bond issues that are being used by [name of local government owner or operator, or guarantor] to demonstrate financial responsibility are as follows: [complete table]

Issue Date	Maturity Date	Outstanding Amount	Bond Rating	Rating Agency
---------------	------------------	-----------------------	----------------	---------------

[Moody's or Standard & Poor's]

The total outstanding obligation of [insert amount], excluding refunded bond issues, exceeds the minimum amount of \$1 million. All outstanding revenue bonds issued by this government that have been rated by Moody's or Standard & Poor's are rated as at least investment grade (Moody's Baa or Standard & Poor's BBB) based on the most recent ratings published within the last 12 months. The revenue bonds listed are not backed by third-party credit enhancement or are insured by a municipal bond insurance company. Neither rating service has provided notification within the last 12 months of downgrading of bond ratings below investment grade or of withdrawal of bond rating other than for repayment of outstanding bond issues.

I hereby certify that the wording of this letter is identical to the wording specified in 40 CFR Part 280.104(e) as such regulations were constituted on the date shown immediately below.

[Date]\_\_\_\_\_

[Signature]\_\_\_\_\_

[Name]\_\_\_\_\_

[Title]\_\_\_\_\_

## APPENDIX C

### Letter from Chief Financial Officer

I am the chief financial officer of [insert: name and address of the owner or operator]. This letter is in support of the use of the local government financial test to demonstrate financial responsibility for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage"] caused by [insert: "sudden accidental releases" and/or "nonsudden accidental releases"] in the amount of at least [insert: dollar amount] per occurrence and [insert dollar amount] annual aggregate arising from operating (an) underground storage tank(s).

Underground storage tanks at the following facilities are assured by this financial test: [List for each facility: the name and address of the facility where tanks assured by this financial test are located. If separate mechanisms or combinations of mechanisms are being used to assure any of the tanks at this facility, list each tank assured by this financial test by the tank identification number provided in the notification submitted pursuant to 40 CFR Part 280.22 or the corresponding state requirements].

This owner or operator has not received an adverse opinion, or a disclaimer of opinion from an independent auditor on its financial statements for the latest completed fiscal year. Any outstanding issues of general obligation or revenue bonds, if rated, have a Moody's rating of Aaa, Aa, A, or Baa or a Standard and Poor's rating of AAA, AA, A, or BBB; if rated by both firms, the bonds have a Moody's rating of Aaa, Aa, A, or Baa and a Standard and Poor's rating of AAA, AA, A, or BBB.

### Worksheet for Municipal Financial Test

#### Part I: Basic Information

##### 1. Total Revenues

a. Revenues (dollars)\_\_\_\_\_

Value of revenues excludes liquidation of investments and issuance of debt. Value includes all general fund operating and non-operating revenues, as well as all revenues from all other governmental funds including enterprise, debt service, capital projects, and special revenues, but excluding revenues to funds held in a trust or agency capacity.

b. Subtract interfund transfers (dollars)\_\_\_\_\_

c. Total Revenues (dollars)\_\_\_\_\_

##### 2.Total Expenditures

a. Expenditures (dollars)\_\_\_\_\_

Value consists of the sum of general fund operating and non operating expenditures including interest payments on debt, payments for retirement of debt principal, and total expenditures from all other governmental funds including enterprise, debt service, capital projects, and special revenues.

b. Subtract interfund transfers (dollars)\_\_\_\_\_

c. Total expenditures (dollars)\_\_\_\_\_

3. Local Revenues

a. Total Revenues (from 1c) (dollars)\_\_\_\_\_

b. Subtract total intergovernmental transfers (dollars)\_\_\_\_\_

c. Local Revenues (dollars)\_\_\_\_\_

4. Debt Service

a. Interest and fiscal charges (dollars)\_\_\_\_\_

b. Add debt retirement (dollars)\_\_\_\_\_

c. Total Debt Service (dollars)\_\_\_\_\_

5. Total Funds (Dollars)\_\_\_\_\_

(Sum of amounts held as cash and investment securities from all funds, excluding amounts held for employee retirement funds, agency funds, and trust funds).

6. Population (Persons)\_\_\_\_\_

**Part II: Application of Test**

7. Total Revenues to Population

a. Total Revenues (from 1c)\_\_\_\_\_

b. Population (from 6)\_\_\_\_\_

c. Divide 7a by 7b\_\_\_\_\_

d. Subtract 417\_\_\_\_\_

e. Divide by 5,212\_\_\_\_\_

f. Multiply by 4.095\_\_\_\_\_

8. Total Expenses to Population

a. Total Expenses (from 2c)\_\_\_\_\_

b. Population (from 6)\_\_\_\_\_

c. Divide 8a by 8b\_\_\_\_\_

d. Subtract 524\_\_\_\_\_

e. Divide by 5,401\_\_\_\_\_

f. Multiply by 4.095\_\_\_\_\_

9. Local Revenues to Total Revenues

a. Local Revenues (from 3c)\_\_\_\_\_

- b. Total Revenues (from 1c)\_\_\_\_\_
- c. Divide 9a by 9b\_\_\_\_\_
- d. Subtract .695\_\_\_\_\_
- e. Divide by .205\_\_\_\_\_
- f. Multiply by 2.840\_\_\_\_\_

#### 10. Debt Service to Population

- a. Debt Service (from 4d)\_\_\_\_\_
- b. Population (from 6)\_\_\_\_\_
- c. Divide 10a by 10b\_\_\_\_\_
- d. Subtract 51\_\_\_\_\_
- e. Divide by 1,038\_\_\_\_\_
- f. Multiply by -1.866\_\_\_\_\_

#### 11. Debt Service to Total Revenues

- a. Debt Service (from 4d)\_\_\_\_\_
- b. Total Revenues(from 1c)\_\_\_\_\_
- c. Divide 11a by 11b\_\_\_\_\_
- d. Subtract .068\_\_\_\_\_
- e. Divide by .259\_\_\_\_\_
- f. Multiply by -3.533\_\_\_\_\_

#### 12. Total Revenues to Total Expenses

- a. Total Revenues (from 1c)\_\_\_\_\_
- b. Total Expenses (from 2c)\_\_\_\_\_
- c. Divide 12a by 12b\_\_\_\_\_
- d. Subtract .910\_\_\_\_\_
- e. Divide by .899\_\_\_\_\_
- f. Multiply by 3.458\_\_\_\_\_

#### 13. Funds Balance to Total Revenues

- a. Total Funds (from 5)\_\_\_\_\_
- b. Total Revenues (from 1c)\_\_\_\_\_
- c. Divide 13a by 13b\_\_\_\_\_
- d. Subtract .891\_\_\_\_\_
- e. Divide by 9.156\_\_\_\_\_
- f. Multiply by 3.270\_\_\_\_\_

#### 14. Funds Balance to Total Expenses



- a. Total Funds (from 5)\_\_\_\_\_
- b. Total Expenses (from 2c)\_\_\_\_\_
- c. Divide 14a by 14b\_\_\_\_\_
- d. Subtract .866\_\_\_\_\_
- e. Divide by 6.409\_\_\_\_\_
- f. Multiply by 3.270\_\_\_\_\_

15. Total Funds to Population

- a. Total Funds (from 5)\_\_\_\_\_
- b. Population (from 6)\_\_\_\_\_
- c. Divide 15a by 15b\_\_\_\_\_
- d. Subtract 270\_\_\_\_\_
- e. Divide by 4,548\_\_\_\_\_
- f. Multiply by 1.866\_\_\_\_\_

16. Add  $7f + 8f + 9f + 10f + 11f + 12f + 13f + 14f$   
 $+ 15f + 4.937$  \_\_\_\_\_

I hereby certify that the financial index shown on line 16 of the worksheet is greater than zero and that the wording of this letter is identical to the wording specified in 40 CFR Part 280.105(c) as such regulations were constituted on the date shown immediately below.

[Date]

[Signature]

[Name]

[Title]

## **APPENDIX D**

### **Local Government Guarantee With Standby Trust Made by a State**

Guarantee made this [date] by [name of state], herein referred to as guarantor, to [the state implementing agency] and to any and all third parties, and obliges, on behalf of [local government owner or operator].

#### **Recitals**

(1) Guarantor is a state.

(2) [Local government owner or operator] owns or operates the following underground storage tank(s) covered by this guarantee: [List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to 40 CFR Part 280 or the corresponding state requirement, and the name and address of the facility.] This guarantee satisfies 40 CFR Part 280, Subpart H requirements for assuring funding for [insert "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "honsudden accidental releases" or "accidental releases"; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the above-identified underground storage tank(s) in the amount of [insert dollar amount] per occurrence and [insert dollar amount] annual aggregate.

(3) Guarantor guarantees to [implementing agency] and to any and all third parties that:

In the event that [local government owner or operator] fails to provide alternative coverage within 60 days after receipt of a notice of cancellation of this guarantee and the [Director of the implementing agency] has determined or suspects that a release has occurred at an underground storage tank covered by this guarantee, the guarantor, upon instructions from the [Director] shall fund a standby trust fund in accordance with the provisions of 40 CFR part 280.112, in an amount not to exceed the coverage limits specified above.

In the event that the [Director] determines that [local government owner or operator] has failed to perform corrective action for releases arising out of the operation of the above-identified tank(s) in accordance with 40 CFR part 280, subpart F, the guarantor upon written instructions from the [Director] shall fund a standby trust fund in accordance with the provisions of 40 CFR part 280.112, in an amount not to exceed the coverage limits specified above.

If [owner or operator] fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by ["sudden" and/or "honsudden"] accidental releases arising from the operation of the above-identified tank(s), or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the guarantor, upon written instructions from the [Director], shall fund a standby trust in accordance with the provisions of 40 CFR part 280.112 to satisfy such judgment(s), award(s), or settlement agreement(s) up to the limits of coverage specified above.

(4) Guarantor agrees to notify [owner or operator] by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code naming guarantor as debtor, within 10 days after

commencement of the proceeding.

(5) Guarantor agrees to remain bound under this guarantee notwithstanding any modification or alteration of any obligation of [owner or operator] pursuant to 40 CFR part 280.

(6) Guarantor agrees to remain bound under this guarantee for so long as [local government owner or operator] must comply with the applicable financial responsibility requirements of 40 CFR part 280, Subpart H for the above identified tank(s), except that guarantor may cancel this guarantee by sending notice by certified mail to [owner or operator], such cancellation to become effective no earlier than 120 days after receipt of such notice by [owner or operator], as evidenced by the return receipt.

(7) The guarantor's obligation does not apply to any of the following:

(a) Any obligation of [local government owner or operator] under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;

(b) Bodily injury to an employee of [insert local government owner or operator] arising from, and in the course of, employment by [insert: local government owner or operator];

(c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;

(d) Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by [insert: local government owner or operator] that is not the direct result of a release from a petroleum underground storage tank;

(e) Bodily damage or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 40 CFR part 280.93.

(8) Guarantor expressly waives notice of acceptance of this guarantee by [the implementing agency], by any or all third parties, or by [local government owner or operator].

I hereby certify that the wording of this guarantee is identical to the wording specified in 40 CFR part 280.106(d) as such regulations were constituted on the effective date shown immediately below.

Effective date: \_\_\_\_\_

[Name of guarantor]

[Authorized signature for guarantor]

[Name of person signing]

[Title of person signing]

Signature of witness or notary:

\_\_\_\_\_

## **APPENDIX E**

### **Local Government Guarantee With Standby Trust Made by a Local Government**

Guarantee made this [date] by [name of guaranteeing entity], a local government organized under the laws of [name of state], herein referred to as guarantor, to [the state implementing agency] and to any and all third parties, and obliges, on behalf of [local government owner or operator].

#### **Recitals**

(1) Guarantor meets or exceeds [select one: the local government bond rating test requirements of 40 CFR Part 280.104, the local government financial test requirements of 40 CFR Part 280.105, or the local government fund under 40 CFR Part 280.107(a), 280.107(b), or 280.107(c)].

(2) [Local government owner or operator] owns or operates the following underground storage tank(s) covered by this guarantee: [List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to 40 CFR Part 280 or the corresponding state requirement, and the name and address of the facility.] This guarantee satisfies 40 CFR Part 280, Subpart H requirements for assuring funding for [insert "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "honsudden accidental releases" or "accidental releases"; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the above-identified underground storage tank(s) in the amount of [insert dollar amount] per occurrence and [insert dollar amount] annual aggregate.

(3) Incident to our substantial governmental relationship with [local government owner or operator], guarantor guarantees to [implementing agency] and to any and all third parties that:

In the event that [local government owner or operator] fails to provide alternative coverage within 60 days after receipt of a notice of cancellation of this guarantee and the [Director of the implementing agency] has determined or suspects that a release has occurred at an underground storage tank covered by this guarantee, the guarantor, upon instructions from the [Director] shall fund a standby trust fund in accordance with the provisions of 40 CFR part 280.112, in an amount not to exceed the coverage limits specified above.

In the event that the [Director] determines that [local government owner or operator] has failed to perform corrective action for releases arising out of the operation of the above-identified tank(s) in accordance with 40 CFR part 280, subpart F, the guarantor upon written instructions from the [Director] shall fund a standby trust fund in accordance with the provisions of 40 CFR part 280.112, in an amount not to exceed the coverage limits specified above.

If [owner or operator] fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by ["sudden" and/or "honsudden"] accidental releases arising from the operation of the above-identified tank(s), or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the guarantor, upon written instructions from the [Director], shall fund a standby trust in accordance with the provisions of 40 CFR part

280.112 to satisfy such judgment(s), award(s), or settlement agreement(s) up to the limits of coverage specified above.

(4) Guarantor agrees that, if at the end of any fiscal year before cancellation of this guarantee, the guarantor fails to meet or exceed the requirements of the financial responsibility mechanism specified in paragraph (1), guarantor shall send within 120 days of such failure, by certified mail, notice to [local government owner or operator], as evidenced by the return receipt.

(5) Guarantor agrees to notify [owner or operator] by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code naming guarantor as debtor, within 10 days after commencement of the proceeding.

(6) Guarantor agrees to remain bound under this guarantee notwithstanding any modification or alteration of any obligation of [owner or operator] pursuant to 40 CFR part 280.

(7) Guarantor agrees to remain bound under this guarantee for so long as [local government owner or operator] must comply with the applicable financial responsibility requirements of 40 CFR part 280, Subpart H for the above identified tank(s), except that guarantor may cancel this guarantee by sending notice by certified mail to [owner or operator], such cancellation to become effective no earlier than 120 days after receipt of such notice by [owner or operator], as evidenced by the return receipt.

(8) The guarantor's obligation does not apply to any of the following:

(a) Any obligation of [local government owner or operator] under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;

(b) Bodily injury to an employee of [insert local government owner or operator] arising from, and in the course of employment by [insert: local government owner or operator];

(c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;

(d) Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by [insert: local government owner or operator] that is not the direct result of a release from a petroleum underground storage tank;

(e) Bodily damage or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 40 CFR part 280.93.

(9) Guarantor expressly waives notice of acceptance of this guarantee by [the implementing agency], by any or all third parties, or by [local government owner or operator].

I hereby certify that the wording of this guarantee is identical to the wording specified in 40 CFR part 280.106(d) as such regulations were constituted on the effective date shown immediately below.

Effective date: \_\_\_\_\_

[Name of guarantor]

[Authorized signature for guarantor]

[Name of person signing]

[Title of person signing]

Signature of witness or notary:

## **APPENDIX F**

### **Local Government Guarantee Without Standby Trust Made by a State**

Guarantee made this [date] by [name of state], herein referred to as guarantor, to [the state implementing agency] and to any and all third parties, and obliges, on behalf of [local government owner or operator].

#### **Recitals**

(1) Guarantor is a state.

(2) [Local government owner or operator] owns or operates the following underground storage tank(s) covered by this guarantee: [List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to 40 CFR Part 280 or the corresponding state requirement, and the name and address of the facility.] This guarantee satisfies 40 CFR Part 280, Subpart H requirements for assuring funding for [insert "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "honsudden accidental releases" or "accidental releases"; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the above-identified underground storage tank(s) in the amount of [insert: dollar amount] per occurrence and [insert: dollar amount] annual aggregate.

(3) Guarantor guarantees to [implementing agency] and to any and all third parties and obliges that:

In the event that [local government owner or operator] fails to provide alternative coverage within 60 days after receipt of a notice of cancellation of this guarantee and the [Director of the implementing agency] has determined or suspects that a release has occurred at an underground storage tank covered by this guarantee, the guarantor, upon written instructions from the [Director] shall make funds available to pay for corrective actions and compensate third parties for bodily injury and property damage in an amount not to exceed the coverage limits specified above.

In the event that the [Director] determines that [local government owner or operator] has failed to perform corrective action for releases arising out of the operation of the above-identified tank(s) in accordance with 40 CFR part 280, Subpart F, the guarantor upon written instructions from the [Director] shall make funds available to pay for corrective actions in an amount not to exceed the coverage limits specified above.

If [owner or operator] fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by ["sudden" and/or "honsudden"] accidental releases arising from the operation of the above-identified tank(s), or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the guarantor, upon written instructions from the [Director], shall make funds available to compensate third parties for bodily injury and property damage in an amount not to exceed the coverage limits specified above.

(4) Guarantor agrees to notify [owner or operator] by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code naming guarantor as debtor, within 10 days after

commencement of the proceeding.

(5) Guarantor agrees to remain bound under this guarantee notwithstanding any modification or alteration of any obligation of [owner or operator] pursuant to 40 CFR Part 280.

(6) Guarantor agrees to remain bound under this guarantee for so long as [local government owner or operator] must comply with the applicable financial responsibility requirements of 40 CFR part 280, Subpart H for the above identified tank(s), except that guarantor may cancel this guarantee by sending notice by certified mail to [owner or operator], such cancellation to become effective no earlier than 120 days after receipt of such notice by [owner or operator], as evidenced by the return receipt. If notified of a probable release, the guarantor agrees to remain bound to the terms of this guarantee for all charges arising from the release, up to the coverage limits specified above, notwithstanding the cancellation of the guarantee with respect to future releases.

(7) The guarantor's obligation does not apply to any of the following:

(a) Any obligation of [local government owner or operator] under a workers' compensation disability benefits, or unemployment compensation law or other similar law;

(b) Bodily injury to an employee of [insert local government owner or operator] arising from, and in the course of, employment by [insert: local government owner or operator];

(c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;

(d) Property damage to any property owned, rented, loaded to, in the care, custody, or control of, or occupied by [insert: local government owner or operator] that is not the direct result of a release from a petroleum underground storage tank;

(e) Bodily damage or property damage for which [insert: owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 40 CFR Part 280.93.

(8) Guarantor expressly waives notice of acceptance of this guarantee by [the implementing agency], by any or all third parties, or by [local government owner or operator].

I hereby certify that the wording of this guarantee is identical to the wording specified in 40 CFR Part 280.106(e) as such regulations were constituted on the effective date shown immediately below.

Effective date: \_\_\_\_\_

[Name of guarantor]

[Authorized signature for guarantor]

[Name of person signing]

[Title of person signing]

Signature of witness or notary:

## **APPENDIX G**

### **Local Government Guarantee Without Standby Trust Made by a Local Government**

Guarantee made this [date] by [name of guaranteeing entity], a local government organized under the laws of [name of state], herein referred to as guarantor, to [the state implementing agency] and to any and all third parties, and obliges, on behalf of [local government owner or operator].

#### **Recitals**

(1) Guarantor meets or exceeds [select one: the local government bond rating test requirements of 40 CFR Part 280.104, the local government financial test requirements of 40 CFR Part 280.105, or the local government fund under 40 CFR Part 280.107(a), 280.107(b), or 280.107(c)].

(2) [Local government owner or operator] owns or operates the following underground storage tank(s) covered by this guarantee: [List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to 40 CFR Part 280 or the corresponding state requirement, and the name and address of the facility.] This guarantee satisfies 40 CFR Part 280, Subpart H requirements for assuring funding for [insert "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "honsudden accidental releases" or "accidental releases"; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the above-identified underground storage tank(s) in the amount of [insert dollar amount] per occurrence and [insert dollar amount] annual aggregate.

(3) Incident to our substantial governmental relationship with [local government owner or operator], guarantor guarantees to [implementing agency] and to any and all third parties and obliges that:

In the event that [local government owner or operator] fails to provide alternative coverage within 60 days after receipt of a notice of cancellation of this guarantee and the [Director of the implementing agency] has determined or suspects that a release has occurred at an underground storage tank covered by this guarantee, the guarantor, upon written instructions from the [Director] shall make funds available to pay for corrective actions and compensate third parties for bodily injury and property damage in an amount not to exceed the coverage limits specified above.

In the event that the [Director] determines that [local government owner or operator] has failed to perform corrective action for releases arising out of the operation of the above-identified tank(s) in accordance with 40 CFR part 280, subpart F, the guarantor upon written instructions from the [Director] shall make funds available to pay for corrective actions in an amount not to exceed the coverage limits specified above.

If [owner or operator] fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by ["sudden" and/or "honsudden"] accidental releases arising from the operation of the above-identified tank(s), or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the guarantor, upon written instructions from the [Director], shall make funds available to compensate third parties for bodily injury and



property damage in an amount not to exceed the coverage limits specified above.

(4) Guarantor agrees that, if at the end of any fiscal year before cancellation of this guarantee, the guarantor fails to meet or exceed the requirements of the financial responsibility mechanism specified in paragraph (1), guarantor shall send within 120 days of such failure, by certified mail, notice to [local government owner or operator], as evidence by the return receipt.

(5) Guarantor agrees to notify [owner or operator] by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code naming guarantor as debtor, within 10 days after commencement of the proceeding.

(6) Guarantor agrees to remain bound under this guarantee notwithstanding any modification or alteration of any obligation of [owner or operator] pursuant to 40 CFR part 280.

(7) Guarantor agrees to remain bound under this guarantee for so long as [local government owner or operator] must comply with the applicable financial responsibility requirements of 40 CFR part 280, Subpart H for the above identified tank(s), except that guarantor may cancel this guarantee by sending notice by certified mail to [owner or operator], such cancellation to become effective no earlier than 120 days after receipt of such notice by [owner or operator], as evidenced by the return receipt. If notified of a probable release, the guarantor agrees to remain bound to the terms of this guarantee for all charges arising from the release, up to the coverage limits specified above, notwithstanding the cancellation of the guarantee with respect to future releases.

(8) The guarantor's obligation does not apply to any of the following:

(a) Any obligation of [local government owner or operator] under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;

(b) Bodily injury to an employee of [insert local government owner or operator] arising from, and in the course of employment by [insert: local government owner or operator];

(c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;

(d) Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by [insert: local government owner or operator] that is not the direct result of a release from a petroleum underground storage tank;

(e) Bodily damage or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 40 CFR part 280.93.

(9) Guarantor expressly waives notice of acceptance of this guarantee by [the implementing agency], by any or all third parties, or by [local government owner or operator].

I hereby certify that the wording of this guarantee is identical to the wording specified in 40 CFR part 280.106(d) as such regulations were constituted on the effective date shown immediately below.

Effective date: \_\_\_\_\_

[Name of guarantor]

[Authorized signature for guarantor]

[Name of person signing]

[Title of person signing]

Signature of witness or notary:

## APPENDIX H

### Letter from Chief Financial Officer

I am the chief financial officer of [insert: name and address of local government owner or operator, or guarantor]. This letter is in support of the use of the local government fund mechanism to demonstrate financial responsibility for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage"] caused by [insert: "sudden accidental releases" and/or "honsudden accidental releases"] in the amount of at least [insert: dollar amount] per occurrence and [insert dollar amount] annual aggregate arising from operating (an) underground storage tank(s).

Underground storage tanks at the following facilities are assured by this local government fund mechanism: [List for each facility: the name and address of the facility where tanks are assured by the local government fund].

[Insert: "The local government fund is funded for the full amount of coverage required under § 280.93, or funded for part of the required amount of coverage and used in combination with other mechanism(s) that provide the remaining coverage." or "The local government fund is funded for five times the full amount of coverage required under § 280.93, or funded for part of the required amount of coverage and used in combination with other mechanism(s) that provide the remaining coverage," or "A payment is made to the fund once every year for seven years until the fund is fully-funded and [name of local government owner or operator] has available bonding authority, approved through voter referendum, of an amount equal to the difference between the required amount of coverage and the amount held in the dedicated fund" or "A payment is made to the fund once every year for seven years until the fund is fully-funded and I have attached a letter signed by the State Attorney General stating that (1) the use of the bonding authority will not increase the local government's debt beyond the legal debt ceilings established by the relevant state laws and (2) that prior voter approval is not necessary before use of the bonding authority"].

The details of the local government fund are as follows:

Amount in Fund (market value of fund at close of last fiscal year):\_\_\_\_\_

[If fund balance is incrementally funded as specified in 280.107(c), insert:

Amount added to fund in the most recently completed fiscal year:\_\_\_\_\_

Number of years remaining in the pay-in period:\_\_\_\_\_]

A copy of the state constitutional provision, or local government statute, charter, ordinance or order dedicating the fund is attached.

I hereby certify that the wording of this letter is identical to the wording specified in 40 CFR Part 280.107(d) as such regulations were constituted on the date shown immediately below.

[Date]\_\_\_\_\_

[Signature]\_\_\_\_\_

[Name]\_\_\_\_\_

[Title]\_\_\_\_\_

## **APPENDIX I**

### **Certification of Financial Responsibility**

[Owner or operator] hereby certifies that it is in compliance with the requirements of subpart H of 40 CFR part 280.

The financial assurance mechanism(s) used to demonstrate financial responsibility under subpart H of 40 CFR part 280 is(are) as follows:

[For each mechanism, list the type of mechanism, name of issuer, mechanism number (if applicable), amount of coverage, effective period of coverage and whether the mechanism covers "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases."]

[Signature of owner or operator]

[Name of owner or operator]

[Title]

[Date]

[Signature of witness or notary]

[Name of witness or notary]

[Date]



## Virginia Department of Environmental Quality

### Regulation for Aboveground Storage Tank and Pipeline Facility Financial Responsibility Requirements

#### **INTRODUCTION**

Effective March 2, 2001, the Aboveground Storage Tank and Pipeline Facility Financial Responsibility Requirements Regulation, 9 VAC 25-640-10 *et seq.* requires operators of aboveground storage tank and pipeline facilities to demonstrate that they have adequate financial resources to perform their responsibility to contain and cleanup any oil discharges which may occur at their facilities.

#### **WHO MUST DEMONSTRATE?**

Operators of regulated aboveground storage tank facilities having a maximum aggregate storage capacity of 25,000 gallons or greater and operators of pipeline facilities must demonstrate financial responsibility in accordance with the requirements of this chapter.

#### **EXEMPTED FACILITIES**

1. Operators of state and federal entities whose debts and liabilities are the debts and liabilities of the Commonwealth or the United States and local government entities are not required to comply with the requirements under this chapter.
2. Operators of regulated aboveground storage tank facilities having a maximum aggregate storage capacity less than 25,000 gallons.

#### **FINANCIAL RESPONSIBILITY REQUIREMENTS**

1. The demonstration amount for ASTs is set at five cents per gallon of aboveground storage capacity with a cap of one million dollars.
2. The demonstration amount for pipelines is five million dollars.
3. To demonstrate FR the operator must have proof of at least one of the following financial documents (in the form specified in 9 VAC 25-640-10 *et seq.*):

- |                                |                                     |
|--------------------------------|-------------------------------------|
| • Letter of Self-insurance     | • Trust Agreement                   |
| • Surety Bond w/ Standby Trust | • Letter of Credit w/ Standby Trust |
| • Insurance Policy             | • Corporate Guarantee               |

Table 1 lists the types of mechanisms, the regulation section citing the requirements for the use of each mechanism and the number of the appendix to 9 VAC 25-640-10 *et seq.* which contains the language that must be used for the mechanism.

4. The operator must use the exact language provided in 9 VAC 25-640-10 *et seq.*
5. This documentation is the proof that the operator can pay their share of containment and cleanup if a release should occur. It must be updated annually and retained by the operator (either at the facility, or at corporate headquarters. However, if corporate headquarters is not in Virginia FR must be kept at the facility.

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Table 1 – AST and Pipeline Facility Financial Responsibility Mechanism Requirements

<b>Assurance Mechanism</b>	<b>Requirements</b>	<b>9 VAC 640-10 et seq. Appendix</b>
Financial Test of Self-Insurance	9 VAC 25-640-70	Appendix I and IX
Guarantee	9 VAC 25-640-80	Appendices I, II, and IX
Insurance	9 VAC 25-640-90	Appendix III or IV, and IX
Surety Bond w/ Standby Trust	9 VAC 25-640-100	Appendices V, VI, and IX
Letter of Credit w/ Standby Trust	9 VAC 25-640-110	Appendices VI, VII, and IX
Trust Fund	9 VAC 25-640-120	Appendices VII and IX

### **QUESTIONS?**

If you have any questions regarding your responsibilities under 9 VAC 25-640-10 *et seq.*, please contact Cara Kail at (804) 698-4053.

**NOTE:** This handout presents a general overview of regulation 9 VAC 25-640-10 *et seq.* For exact requirements, please consult the regulation.

**CHAPTER 640**  
**ABOVEGROUND STORAGE TANK AND PIPELINE FACILITY**  
**FINANCIAL RESPONSIBILITY REQUIREMENTS.**

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9 VAC 25-640-20.	Applicability.
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9 VAC 25-640-220.	Virginia Petroleum Storage Tank Fund.
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Appendix I.	Letter from Chief Financial Officer.
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Appendix VI.	Irrevocable Standby Letter of Credit.
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Appendix VIII.	Certification of Acknowledgment.
Appendix IX.	Certification of Financial Responsibility.





## **9 VAC 25-640-10. Definitions.**

The following words and terms when used in this chapter shall have the following meanings, unless the context clearly indicates otherwise:

**"Aboveground storage tank" or "AST"** means any one or combination of tanks, including pipes, used to contain an accumulation of oil at atmospheric pressure, and the volume of which, including the volume of the pipes, is more than ninety percent above the surface of the ground. This term does not include line pipe and breakout tanks of an interstate pipeline regulated under the federal Accountable Pipeline Safety and Partnership Act of 1996 (49 USC § 60101 et seq.).

**"Accidental discharge"** means any sudden or nonsudden discharge of oil from a facility that results in a need for containment and cleanup which was neither expected nor intended by the operator.

**"Annual aggregate"** means the maximum financial responsibility requirement that an owner or operator is required to demonstrate annually.

**"Board"** means the State Water Control Board.

**"Change in service"** means change in operation, conditions of the stored product, specific gravity, corrosivity, temperature or pressure that has occurred from the original that may affect the tank's suitability for service.

**"Containment and cleanup"** means abatement, containment, removal and disposal of oil and, to the extent possible, the restoration of the environment to its existing state prior to an oil discharge.

**"Controlling interest"** means direct ownership of at least 50% of the voting stock of another entity.

**"Department"** or "DEQ" means the Department of Environmental Quality.

**"Discharge"** means any spilling, leaking, pumping, pouring, emitting, emptying or dumping.

**"Facility"** means any development or installation within the Commonwealth that deals in, stores or handles oil, and includes a pipeline.

**"Financial reporting year"** means the latest consecutive 12-month period for which any of the following reports used to support a financial test is prepared: (i) a 10-K report submitted to the U.S. Securities & Exchange Commission (SEC); (ii) an annual report of tangible net worth submitted to Dun and Bradstreet; (iii) annual reports submitted to the Energy Information Administration or the Rural Electrification Administration; or (iv) a year-end financial statement authorized under 9 VAC 25-640-70 B or C of this chapter. "Financial reporting year" may thus comprise a fiscal or calendar year period.

**"Legal defense cost"** means any expense that an operator or provider of financial assurance incurs in defending against claims or actions brought (i) by the federal government or the board to require containment or cleanup or to recover the costs of containment and cleanup, or to collect civil penalties under federal or state law or to assert any claim on behalf of the Virginia Petroleum Storage Tank Fund; (ii) by any person to enforce the terms of a financial assurance mechanism.

**"Local government entity"** means a municipality, county, town, commission, separately chartered and operated special district, school board, political subdivision of a state or other special purpose government which provides essential services.

**"Occurrence"** means an accident, including continuous or repeated exposure to conditions, which results in a discharge from an AST. Note: This definition is intended to assist in the understanding of this chapter and is not intended either to limit the meaning of "occurrence" in a way that conflicts with standard insurance usage or to prevent the use of other standard insurance terms in place of "occurrence."

**"Oil"** means oil of any kind and in any form, including, but not limited to, petroleum and petroleum by-products, fuel oil, lubricating oils, sludge, oil refuse, oil mixed with other wastes, crude oil and all other liquid hydrocarbons regardless of specific gravity.

**"Operator"** means any person who owns, operates, charters by demise, rents or otherwise exercises control over or responsibility for a facility or a vehicle or a vessel.

**"Person"** means an individual; trust; firm; joint stock company; corporation, including a government corporation; partnership; association; any state or agency thereof; municipality; county; town; commission; political subdivision of a state; any interstate body; consortium; joint venture; commercial entity; the government of the United States or any unit or agency thereof.

**"Pipeline"** means all new and existing pipe, rights of way, and any equipment, facility, or building used in the transportation of oil, including, but not limited to, line pipe, valves and other appurtenances connected to line pipe, pumping units, fabricated assemblies associated with pumping units, metering and delivery stations and fabricated assemblies therein, and breakout tanks.

**"Provider of financial assurance"** means a person that provides financial assurance to an operator of an aboveground storage tank through one of the mechanisms listed in 9 VAC 25-640-70 through -120, including a guarantor, insurer, group self insurance pool, surety, or issuer of a letter of credit.

**"Storage capacity"** means the total capacity of an AST or a container, whether filled in whole or in part with oil, a mixture of oil, or mixtures of oil with nonhazardous substances, or empty. An AST that has been permanently closed in accordance with the requirements of 9 VAC 25-91-10 *et seq.* has no storage capacity.

**"Substantial business relationship"** means the extent of a business relationship necessary under Virginia law to make a guarantee contract issued incident to that relationship valid and enforceable. A guarantee contract is issued "incident to that relationship" if it arises from and depends on existing economic transactions between the guarantor and the operator.

**"Tangible net worth"** means the tangible assets that remain after deducting liabilities; such assets do not include intangibles such as goodwill and rights to patents or royalties. For purposes of this definition, "assets" means all existing and all probable future economic benefits obtained or controlled by a particular entity as a result of past transactions.

**"Tank"** means a device designed to contain an accumulation of oil and constructed of non-earthen materials, such as concrete, steel, or plastic, that provides structural support. This term does not include flow-through process tanks as defined in 40 CFR Part 280.

**"Termination"** under Appendix III and Appendix IV means only those changes that could result in a gap in coverage as where the insured has not obtained substitute coverage or has obtained substitute coverage with a different retroactive date than the retroactive date of the original policy.

**"Underground storage tank"** means any one or combination of tanks, including connecting pipes, used to contain an accumulation of regulated substances, and the volume of which, including the volume of underground connecting pipes, is ten percent or more beneath the surface of the ground. This term does not include any:

1. Farm or residential tanks having a capacity of 1,100 gallons or less and used for storing motor fuel for noncommercial purposes;
2. Tanks used for storing heating oil for consumption on the premises where stored;
3. Septic tanks;
4. Pipeline facilities (including gathering lines) regulated under:

- a. The Natural Gas Pipeline Safety Act of 1968 (49 USC App. 1671, *et seq.*),
  - b. The Hazardous Liquid Pipeline Safety Act of 1979 (49 USC App. 2001, *et seq.*), or
  - c. Any intrastate pipeline facility regulated under state laws comparable to the provisions of the law referred to in subdivision 4 a or 4 b of this definition;
- 5. Surface impoundments, pits, ponds, or lagoons;
  - 6. Storm water or wastewater collection systems;
  - 7. Flow-through process tanks;
  - 8. Liquid traps or associated gathering lines directly related to oil or gas production and gathering operations; or
  - 9. Storage tanks situated in an underground area, such as a basement, cellar, mineworking, drift, shaft, or tunnel, if the storage tank is situated upon or above the surface of the floor.

The term "underground storage tank" does not include any pipes connected to any tank which is described in subdivisions 1 through 9 of this definition.

**"Vehicle"** means any motor vehicle, rolling stock, or other artificial contrivance for transport whether self-propelled or otherwise, except vessels.

**"Vessel"** means every description of watercraft or other contrivance used as a means of transporting on water, whether self-propelled or otherwise, and shall include barges and tugs.

#### **9 VAC 25-640-20. Applicability.**

- A. Unless otherwise exempted in this section or excluded in 9 VAC 25-640-30, operators of aboveground storage tank facilities having a maximum storage capacity of 25,000 gallons or greater of oil must demonstrate financial responsibility in accordance with the requirements of this chapter as a condition of operation.
- B. Unless otherwise exempted in this section or excluded in 9 VAC 25-640-30, operators of pipelines must demonstrate financial responsibility in accordance with the requirements of this chapter as a condition of operation.
- C. State and federal government entities whose debts and liabilities are the debts and liabilities of the Commonwealth of Virginia or the United States have the requisite financial strength and stability to fulfill their financial assurance requirements and are relieved of the requirements to further demonstrate an ability to provide financial responsibility under this chapter.
- D. Local government entities are not required to comply with the requirements of this chapter.
- E. If there is more than one operator for a facility, only one operator is required to demonstrate financial responsibility; however, all operators are jointly responsible for ensuring compliance with financial responsibility requirements.

#### **9 VAC 25-640-30. Exclusions.**

The requirements of this chapter do not apply to:

- A. Vessels;
- B. Licensed motor vehicles, unless used solely for the storage of oil;
- C. An AST with a storage capacity of 660 gallons or less of oil;
- D. An AST containing petroleum, including crude oil or any fraction thereof, which is liquid at standard temperature and pressure (60° F at 14.7 pounds per square inch absolute) subject to and specifically listed or designated as a hazardous substance under subparagraphs (A) through (F) of § 101(14) of the federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (42 USC § 9601 *et seq.*);

- E. A wastewater treatment tank system that is part of a wastewater treatment facility regulated under § 402 or § 307(b) of the federal Clean Water Act (33 USC § 1251 *et seq.*);
- F. An AST that is regulated by the Department of Mines, Minerals and Energy under Chapter 22.1 (§ 45.1-361.1 *et seq.*);
- G. An AST used for the storage of products that are regulated pursuant to the federal Food, Drug and Cosmetic Act (21 USC § 301 *et seq.*);
- H. An AST that is used to store hazardous wastes listed or identified under Subtitle C of the Resource Conservation and Recovery Act (RCRA) (Solid Waste Disposal Act) (42 USC § 6901 *et seq.*);
- I. An AST that is used to store propane gas, butane gas or other liquid petroleum gases;
- J. An AST used to store nonpetroleum hydrocarbon-based animal and vegetable oils;
- K. A liquid trap or associated gathering lines directly related to oil or gas production, or gathering operations;
- L. A surface impoundment, pit, pond, or lagoon;
- M. A Storm water or wastewater collection system;
- N. Equipment or machinery that contains oil for operational purposes, including but not limited to lubricating systems, hydraulic systems, and heat transfer systems;
- O. An AST used to contain oil for less than 120 days when: (i) used in connection with activities related to the containment and cleanup of oil; (ii) used by a federal, state or local entity in responding to an emergency; or (iii) used temporarily on-site to replace permanent storage capacity;
- P. Oil-filled electrical equipment, including, but not limited to, transformers, circuit breakers or capacitors;
- Q. A flow-through process tank;
- R. Oily water separators;
- S. An AST containing dredge spoils;
- T. An AST located on a farm or residence used for storing motor fuel for noncommercial purposes with an aggregated storage capacity of 1,100 gallons or less;
- U. Pipes or piping beyond the first valve from the AST that connects an AST with production process tanks or production process equipment;
- V. An AST storing asphalt and asphalt compounds which are not liquid at standard conditions of temperature and pressure (60° F at 14.7 pounds per square inch absolute);
- W. Underground storage tanks regulated under a state program;
- X. An AST with a capacity of 5,000 gallons or less used for storing heating oil for consumptive use on the premises where stored.

#### **9 VAC 25-640-40. Compliance dates.**

Operators of existing facilities are required to comply with the requirements of this chapter within one hundred-twenty (120) days of the effective date of this chapter. Operators of new facilities shall comply with the requirements of this chapter by the date the facility begins operation.

#### **9 VAC 25-640-50. Amount and scope of required financial responsibility.**

- A. Operators shall demonstrate per occurrence and annual aggregate financial responsibility for containment and cleanup of discharges of oil in an amount equal to (i) five cents per gallon of the aggregate aboveground storage capacity for ASTs in all Virginia facilities up to a maximum of one million dollars, and (ii) five million dollars for pipelines.
- B. If the operator uses separate mechanisms or combinations of mechanisms to demonstrate financial responsibility for the containment and clean up of oil, (i) the amount of assurance provided by the combination of mechanisms shall be in the full amount specified in subsection A of this section, and (ii) the operator shall demonstrate financial responsibility in the appropriate amount of annual aggregate

assurance specified in subsection A of this section by the first-occurring effective date anniversary of any one of the mechanisms combined (other than a financial test or guarantee) to provide assurance.

- C. The amounts of assurance required under this section exclude legal defense costs.
- D. The required demonstration of financial responsibility does not in any way limit the liability of the operator under Virginia Code § 62.1-44.34:18.
- E. Operators which demonstrate financial responsibility shall maintain copies of those records on which the determination is based. The following documents may be used by operators to support a financial responsibility requirement determination:
  - 1. Copies of the registration form required under 9 VAC 25-91-10 *et seq.*
  - 2. Any other form of documentation which the board may deem to be acceptable evidence to support the financial responsibility requirement determination.

**9 VAC 25-640-60. Allowable mechanisms and combinations of mechanisms.**

- A. Subject to the limitations of subsection B of this section, an operator may use any one or combination of the mechanisms listed in 9 VAC 25-640-70 through -120 to demonstrate financial responsibility under this chapter for one or more aboveground storage tanks or pipelines.
- B. An operator may use self-insurance in combination with a guarantee only if, for the purpose of meeting the requirements of the financial test under this regulation, the financial statements of the operator are not consolidated with the financial statements of the guarantor.

**9 VAC 25-640-70. Financial test of self-insurance.**

- A. An operator and/or guarantor, may satisfy the requirements of 9 VAC 25-640-50 by passing a financial test as specified in this section. To pass the financial test of self-insurance, the operator and/or guarantor shall meet the requirements of subsections B or C, and D of this section based on year-end financial statements for the latest completed financial reporting year.
- B.
  - 1. The operator and/or guarantor shall have a tangible net worth at least equal to the total of the applicable amount required by 9 VAC 25-640-50 for which a financial test is used to demonstrate financial responsibility.
  - 2. The operator and/or guarantor shall comply with either subdivision a or b below:
    - a.
      - (1) The financial reporting year-end financial statements of the operator and/or guarantor shall be examined by an independent certified public accountant and be accompanied by the accountant's report of the examination; and
      - (2) The financial reporting year-end financial statements of the operator and/or guarantor cannot include an adverse auditor's opinion, a disclaimer of opinion, or a "going concern" qualification.
    - b.
      - (1) (a) File financial statements annually with the U.S. Securities and Exchange Commission, the Energy Information Administration, or the Rural Electrification Administration; or
      - (b) Report annually the tangible net worth of the operator and/or guarantor to Dun and Bradstreet, and Dun and Bradstreet must have assigned a financial strength rating which at least equals the amount of financial responsibility required by the operator in 9 VAC 25-640-50.
    - (2) The financial reporting year-end financial statements of the operator and/or guarantor, if independently audited, cannot include an adverse auditor's opinion, a disclaimer of opinion, or a "going concern" qualification.
- 3. The operator and/or guarantor, shall have a letter signed by the chief financial officer worded identically as specified in Appendix I/Alternative I.
- C.
  - 1. The operator and/or guarantor shall have a tangible net worth at least equal to the total of the applicable amount required by 9 VAC 25-640-50 for which a financial test is used to demonstrate financial responsibility.

2. The financial reporting year-end financial statements of the operator and/or guarantor shall be examined by an independent certified public accountant and be accompanied by the accountant's report of the examination.
  3. The financial reporting year-end financial statements cannot include an adverse auditor's opinion, a disclaimer of opinion, or a "going concern" qualification.
  4. If the financial statements of the operator and/or guarantor are not submitted annually to the U.S. Securities and Exchange Commission, the Energy Information Administration or the Rural Electrification Administration, the operator and/or guarantor shall obtain a special report by an independent certified public accountant stating that:
    - a. The accountant has compared the data that the letter from the chief financial officer specified as having been derived from the latest financial reporting year-end financial statements of the operator and/or guarantor with the amounts in such financial statements; and
    - b. In connection with that comparison, no matters came to the accountant's attention which caused him to believe that the specified data should be adjusted.
  5. The operator and/or guarantor shall have a letter signed by the chief financial officer, worded identically as specified in Appendix I/Alternative II.
- D. To meet the financial demonstration test under subsections B or C of this section, the chief financial officer of the operator and/or guarantor shall sign, within 120 days of the close of each financial reporting year, as defined by the 12-month period for which financial statements used to support the financial test are prepared, a letter worded identically as specified in Appendix I with the appropriate alternative, except that the instructions in brackets are to be replaced by the relevant information and the brackets deleted.
  - E. If an operator using the test to provide financial assurance finds that he no longer meets the requirements of the financial test based on the financial reporting year-end financial statements, the operator shall obtain alternative coverage and submit to the board the appropriate original forms listed in 9 VAC 25-640-170 B within 150 days of the end of the year for which financial statements have been prepared.
  - F. The board may require reports of financial condition at any time from the operator and/or guarantor. If the board finds, on the basis of such reports or other information, that the operator and/or guarantor no longer meets the financial test requirements of subsection B or C and D of this section, the operator shall obtain alternate coverage and submit to the board the appropriate original forms listed in 9 VAC 25-640-170 B within 30 days after notification of such finding.
  - G. If the operator fails to obtain alternate assurance within 150 days of finding that he no longer meets the requirements of the financial test based on the financial reporting year-end financial statements, or within 30 days of notification by the board that he no longer meets the requirements of the financial test, the operator shall notify the board of such failure within 10 days.

**9 VAC 25-640-80. Guarantee.**

- A. An operator may satisfy the requirements of 9 VAC 25-640-50 by obtaining a guarantee that conforms to the requirements of this section. The guarantor shall be:
  1. A firm that:
    - a. Possesses a controlling interest in the operator;
    - b. Possesses a controlling interest in a firm described under subdivision A 1 a of this section; or,
    - c. Is controlled through stock ownership by a common parent firm that possesses a controlling interest in the operator; or,
  2. A firm engaged in a substantial business relationship with the operator and issuing the guarantee as an act incident to that business relationship.
- B. Within 120 days of the close of each financial reporting year the guarantor shall demonstrate that it meets the financial test criteria of 9 VAC 25-640-70 B or C and D based on year-end financial statements for the latest completed financial reporting year by completing the letter from the chief

financial officer described in Appendix I and shall deliver the letter to the operator. If the guarantor fails to meet the requirements of the financial test at the end of any financial reporting year, within 120 days of the end of that financial reporting year the guarantor shall send by certified mail, before cancellation or nonrenewal of the guarantee, notice to the operator. If the board notifies the guarantor that he no longer meets the requirements of the financial test of 9 VAC 25-640-70 B or C and D, the guarantor shall notify the operator within 10 days of receiving such notification from the board. In both cases, the guarantee will terminate no less than 120 days after the date the operator receives the notification, as evidenced by the return receipt. The operator shall obtain alternate coverage as specified in 9 VAC 25-640-200.

- C. The guarantee shall be worded identically as specified in Appendix II, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.
- D. An operator who uses a guarantee to satisfy the requirements of 9 VAC 25-640-50 shall establish a standby trust fund when the guarantee is obtained. Under the terms of the guarantee, all amounts paid by the guarantor under the guarantee will be deposited directly into the standby trust fund in accordance with instructions from the board under 9 VAC 25-640-180. This standby trust fund shall meet the requirements specified in 9 VAC 25-640-130.

**9 VAC 25-640-90. Insurance and group self-insurance pool coverage.**

- A. 1. An operator may satisfy the requirements of 9 VAC 25-640-50 by obtaining liability insurance that conforms to the requirements of this section from a qualified insurer or group self insurance pool.
  - 2. Such insurance may be in the form of a separate insurance policy or an endorsement to an existing insurance policy.
  - 3. Group self-insurance pools shall comply with Virginia Code § 62.1-44.34:16 and applicable State Corporation Commission Bureau of Insurance regulations.
- B. Each insurance policy shall be amended by an endorsement worded in no respect less favorable than the coverage as specified in Appendix III, or evidenced by a certificate of insurance worded identically as specified in Appendix IV, except that instructions in brackets shall be replaced with the relevant information and the brackets deleted.
- C. Each insurance policy shall be issued by an insurer or a group self-insurance pool that, at a minimum, is licensed to transact the business of insurance or eligible to provide insurance as an excess or approved surplus lines insurer in the Commonwealth of Virginia.
- D. Each insurance policy shall provide first dollar coverage. The insurer or group self-insurance pool shall be liable for the payment of all amounts within any deductible applicable to the policy to the provider of containment and cleanup as provided in this chapter, with a right of reimbursement by the insured for any such payment made by the insurer or group. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated under another mechanism or combination of mechanisms as specified in 9 VAC 25-640-70 through -120.

**9 VAC 25-640-100. Surety bond.**

- A. An operator may satisfy the requirements of 9 VAC 25-640-50 by obtaining a surety bond that conforms to the requirements of this section. The surety company issuing the bond shall be licensed to operate as a surety in the Commonwealth of Virginia and be among those listed as acceptable sureties on federal bonds in the latest Circular 570 of the U.S. Department of the Treasury.
- B. The surety bond shall be worded identically as specified in Appendix V, except that instructions in brackets shall be replaced with the relevant information and the brackets deleted.
- C. Under the terms of the bond, the surety will become liable on the bond obligation when the operator fails to perform as guaranteed by the bond. In all cases, the surety's liability is limited to the per-occurrence and annual aggregate penal sums.
- D. The operator who uses a surety bond to satisfy the requirements of 9 VAC 25-640-50 shall establish a standby trust fund when the surety bond is acquired. Under the terms of the bond, all amounts paid by the surety under the bond will be deposited directly into the standby trust fund in accordance with

instructions from the board under 9 VAC 25-640-180. This standby trust fund shall meet the requirements specified in 9 VAC 25-640-130.

**9 VAC 25-640-110. Letter of credit.**

- A. An operator may satisfy the requirements of 9 VAC 25-640-50 by obtaining an irrevocable standby letter of credit that conforms to the requirements of this section. The issuing institution shall be an entity that has the authority to issue letters of credit in the Commonwealth of Virginia and whose letter-of-credit operations are regulated and examined by a federal agency or the State Corporation Commission.
- B. The letter of credit shall be worded identically as specified in Appendix VI, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.
- C. An operator who uses a letter of credit to satisfy the requirements of 9 VAC 25-640-50 also shall establish a standby trust fund when the letter of credit is acquired. Under the terms of the letter of credit, all amounts paid pursuant to a draft by the board will be deposited by the issuing institution directly into the standby trust fund in accordance with instructions from the board under 9 VAC 25-640-180. This standby trust fund shall meet the requirements specified in 9 VAC 25-640-130.
- D. The letter of credit shall be irrevocable with a term specified by the issuing institution. The letter of credit shall provide that credit will be automatically renewed for the same term as the original term, unless, at least 120 days before the current expiration date, the issuing institution notifies the operator by certified mail of its decision not to renew the letter of credit. Under the terms of the letter of credit, the 120 days will begin on the date when the operator receives the notice, as evidenced by the return receipt.

**9 VAC 25-640-120. Trust fund.**

- A. An operator may satisfy the requirements of 9 VAC 25-640-50 by establishing an irrevocable trust fund that conforms to the requirements of this section. The trustee shall be an entity that has the authority to act as a trustee and whose trust operations are regulated and examined by a federal agency or the State Corporation Commission.
- B. The trust fund shall be irrevocable and shall continue until terminated at the written direction of the grantor and the trustee, or by the trustee and the State Water Control Board, if the grantor ceases to exist. Upon termination of the trust, all remaining trust property, less final trust administration expenses, shall be delivered to the operator. The wording of the trust agreement shall be identical to the wording specified in Appendix VII, and shall be accompanied by a formal certification of acknowledgment as specified in Appendix VIII.
- C. The irrevocable trust fund, when established, shall be funded for the full required amount of coverage, or funded for part of the required amount of coverage and used in combination with other mechanism(s) that provide the remaining required coverage.
- D. If the value of the trust fund is greater than the required amount of coverage, the operator may submit a written request to the board for release of the excess.
- E. If other financial assurance as specified in this chapter is substituted for all or part of the trust fund, the operator may submit a written request to the board for release of the excess.
- F. Within 60 days after receiving a request from the operator for release of funds as specified in subsection D or E of this section, the board will instruct the trustee to release to the operator such funds as the board specifies in writing.

**9 VAC 25-640-130. Standby trust fund.**

- A. An operator using any one of the mechanisms authorized by 9 VAC 25-640-80, 9 VAC 25-640-100, and 9 VAC 25-640-110 shall establish a standby trust fund when the mechanism is acquired. The trustee of the standby trust fund shall be an entity that has the authority to act as a trustee and whose trust operations are regulated and examined by a federal agency or the State Corporation Commission.



- B. The standby trust agreement or trust agreement shall be worded identically as specified in Appendix VII, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted, and accompanied by a formal certification of acknowledgment as specified in Appendix VIII.
- C. The board will instruct the trustee to refund the balance of the standby trust fund to the provider of financial assurance if the board determines that no additional containment and cleanup costs will occur as a result of a discharge covered by the financial assurance mechanism for which the standby trust fund was established.
- D. An operator may establish one trust fund as the depository mechanism for all funds assured in compliance with this rule.

**9 VAC 25-640-140. Substitution of financial assurance mechanisms by operator.**

- A. An operator may substitute any alternate financial assurance mechanisms as specified in this chapter, provided that at all times he maintains an effective financial assurance mechanism or combination of mechanisms that satisfies the requirements of 9 VAC 25-640-50.
- B. After obtaining alternate financial assurance as specified in this chapter, an operator may cancel a financial assurance mechanism by providing notice to the provider of financial assurance.

**9 VAC 25-640-150. Cancellation or non-renewal by a provider of financial assurance.**

- A. Except as otherwise provided, a provider of financial assurance may cancel or fail to renew an assurance mechanism by sending a notice of termination by certified mail to the operator.
  - 1. Termination of a guarantee, a surety bond, or a letter of credit may not occur until 120 days after the date on which the operator receives the notice of termination, as evidenced by the return receipt.
  - 2. Termination of insurance or group self-insurance pool coverage, except for nonpayment or misrepresentation by the insured, may not occur until 60 days after the date on which the operator receives the notice of termination, as evidenced by the return receipt. Termination for nonpayment of premium or misrepresentation by the insured may not occur until a minimum of 15 days after the date on which the operator receives the notice of termination, as evidenced by the return receipt.
- B. If a provider of financial responsibility cancels or fails to renew for reasons other than incapacity of the provider as specified in 9 VAC 25-640-200, the operator shall obtain alternate coverage as specified in this section and shall submit to the board the appropriate original forms listed in 9 VAC 25-640-170 B documenting the alternate coverage within sixty (60) days after receipt of the notice of termination. If the operator fails to obtain alternate coverage within 60 days after receipt of the notice of termination, the operator shall immediately notify the board of such failure and submit:
  - 1. The name and address of the provider of financial assurance;
  - 2. The effective date of termination; and
  - 3. A copy of the financial assurance mechanism subject to the termination maintained in accordance with 9 VAC 25-640-170.

**9 VAC 25-640-160. Reporting by operator.**

- A. Except as specified in 9 VAC 25-640-170 B 7, an operator of a facility existing as of the effective date of this chapter shall comply with the requirements of this chapter within 120 days of the effective date of this chapter.
- B. Except as specified in 9 VAC 25-640-170 B 7, an operator of a facility which does not exist as of the effective date of this chapter shall comply with the requirements of this chapter at least thirty (30) days before the facility commences operation or sixty (60) days after the effective date of this chapter, whichever is later
- C. An operator shall notify the board if the operator fails to obtain alternate coverage as required by this chapter within 30 days after the operator receives notice of:
  - 1. Commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming a provider of financial assurance as a debtor,

2. Suspension or revocation of the authority of a provider of financial assurance to issue a financial assurance mechanism,
  3. Failure of a guarantor to meet the requirements of the financial test,
  4. Other incapacity of a provider of financial assurance.
- D. An operator shall submit the appropriate original forms listed in 9 VAC 25-640-170 B documenting current evidence of financial responsibility to the board as required by 9 VAC 25-640-70 E, 9 VAC 25-640-70 F and 9 VAC 25-640-150 B.
  - E. An operator shall submit to the board the appropriate original forms listed in 9 VAC 25-640-170 B documenting current evidence of financial responsibility upon substitution of its financial assurance mechanism(s) as provided by 9 VAC 25-640-140.
  - F. The board may require an operator to submit evidence of financial assurance as described in 9 VAC 25-640-170 B or other information relevant to compliance with this chapter at any time. The board may require submission of originals or copies, at its sole discretion.

**9 VAC 25-640-170. Record keeping.**

- A. Operators shall maintain evidence of all financial assurance mechanisms used to demonstrate financial responsibility under this chapter for an aboveground storage tank and/or pipeline until released from the requirements of this regulation under 9 VAC 25-640-190. An operator shall maintain such evidence at the aboveground storage tank site or the operator's place of work in this Commonwealth. Records maintained off-site shall be made available upon request of the board.
- B. Operators shall maintain the following types of evidence of financial responsibility:
  1. An operator using an assurance mechanism specified in 9 VAC 25-640-70 through -120 shall maintain the original instrument worded as specified.
  2. An operator using a financial test or guarantee shall maintain (i) the chief financial officer's letter, and (ii) year-end financial statements for the most recent completed financial reporting year or the Dun and Bradstreet rating on which the chief financial officer's letter was based. Such evidence shall be on file no later than 120 days after the close of the financial reporting year.
  3. An operator using a guarantee, surety bond, or letter of credit shall maintain the signed standby trust fund agreement and any amendments to the agreement.
  4. An operator using an insurance policy or group self-insurance pool coverage shall maintain a copy of the signed insurance policy or group self-insurance pool coverage policy, with the endorsement or certificate of insurance and any amendments to the agreements.
  5.
    - a. An operator using an assurance mechanism specified in 9 VAC 25-640-70 through -120 shall maintain an original certification of financial responsibility worded identically as specified in Appendix IX, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.
    - b. The operator shall maintain a new original certification at or before the time specified in 9 VAC 25-640-160 or whenever the financial assurance mechanism(s) used to demonstrate financial responsibility change(s).
  6. An operator using a trust agreement or who is required to prepare a standby trust agreement pursuant to 9 VAC 25-640-130 shall maintain a certification of acknowledgment worded identically as specified in Appendix VIII, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.
  7. For subsequent annual updates required under 9 VAC 25-640-160:
    - a. The operator may maintain an endorsement, a rider or a notice of extension from the provider of financial assurance evidencing continuation of coverage in lieu of a new original surety bond or letter of credit or insurance policy, provided the form of the endorsement, rider or notice of extension is approved by the board;

- b. The operator need not obtain a new original guarantee or trust fund, provided the same mechanism is to continue to act as the operator's demonstration mechanism for the subsequent year or years;
- c. The operator need not obtain a new standby trust agreement, provided the financial assurance mechanism remains the same;
- d. The operator must maintain a new original mechanism as specified in subsection 2 of subsection B of this section;
- e. The operator need not obtain a new original certification of acknowledgment, provided the associated trust agreement has not changed;
- f. The operator must maintain a new original certification of financial responsibility.

**9 VAC 25-640-180. Drawing on financial assurance mechanisms.**

- A. The board shall require the guarantor, surety, or institution issuing a letter of credit to place the amount of funds stipulated by the board, up to the limit of funds provided by the financial assurance mechanism, into the standby trust if:
  - 1. a. The operator fails to establish alternate financial assurance within 60 days after receiving notice of cancellation of the guarantee, surety bond, letter of credit; and
  - b. The board determines or suspects that a discharge from an aboveground storage tank or pipeline covered by the mechanism has occurred and so notifies the operator, or the operator has notified the board pursuant to 9 VAC 25-91-10 *et seq.* of a discharge from an aboveground storage tank or pipeline covered by the mechanism; or
  - 2. The conditions of subsection B of this section are satisfied.
- B. The board may draw on a standby trust fund when the board makes a final determination that a discharge has occurred and immediate or long-term containment and/or cleanup for the discharge is needed, and the operator, after appropriate notice and opportunity to comply, has not conducted containment and cleanup as required under 9 VAC 25-91-10 *et seq.*

**9 VAC 25-640-190. Release from the requirements.**

An operator is no longer required to maintain financial responsibility under this chapter for an aboveground storage tank or pipeline after the tank or pipeline has been permanently closed pursuant to the requirements of 9 VAC 25-91-10 *et seq.*, except when the board determines cleanup of a discharge from the aboveground storage tank or pipeline is required.

**9 VAC 25-640-200. Bankruptcy or other incapacity of operator provider of financial assurance.**

- A. Within 10 days after commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming an operator as debtor, the operator shall notify the board by certified mail of such commencement.
- B. Within 10 days after commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming a guarantor providing financial assurance as debtor, such guarantor shall notify the operator by certified mail of such commencement as required under the terms of the guarantee specified in 9 VAC 25-640-80.
- C. An operator who obtains financial assurance by a mechanism other than the financial test of self-insurance will be deemed to be without the required financial assurance in the event of a bankruptcy or incapacity of its provider of financial assurance, or a suspension or revocation of the authority of the provider of financial assurance to issue a guarantee, insurance policy, group self-insurance pool coverage policy, surety bond, or letter of credit. The operator shall obtain alternate financial assurance as specified in this chapter and submit to the board the appropriate original forms specified in 9 VAC 25-640-170 B within 30 days after receiving notice of such an event. If the operator does not obtain alternate coverage within 30 days after such notification, he shall immediately notify the board in writing.

**9 VAC 25-640-210. Replenishment of guarantees, letters of credit or surety bonds.**

- A. If at any time after a standby trust is funded upon the instruction of the board with funds drawn from a guarantee, letter of credit, or surety bond, and the amount in the standby trust is reduced below the full amount of coverage required, the operator shall by the anniversary date of the financial mechanism from which the funds were drawn:
  - 1. Replenish the value of financial assurance to equal the full amount of coverage required, or
  - 2. Acquire another financial assurance mechanism for the amount by which funds in the standby trust have been reduced.
- B. For purposes of this section, the full amount of coverage required is the amount of coverage to be provided by 9 VAC 25-640-50. If a combination of mechanisms was used to provide the assurance funds which were drawn upon, replenishment shall occur by the earliest anniversary date among the mechanisms.

**9 VAC 25-640-220. Virginia Petroleum Storage Tank Fund.**

The Fund may be used for all uses authorized by Virginia Code § 62.1-44.34:11 in accordance with the requirements specified in 9 VAC 25-590-210.

**9 VAC 25-640-230. Notices to the State Water Control Board.**

All requirements of this chapter for notification to the State Water Control Board shall be addressed as follows:

Director  
Department of Environmental Quality  
629 E. Main Street  
P. O. Box 10009  
Richmond, Virginia 23240-0009.

**9 VAC 25-640-240. Delegation of authority.**

The Director of the Department of Environmental Quality or a designee acting for him may perform any act of the board provided under this chapter, except as limited by § 62.1-44.14 of the Code of Virginia.

**9 VAC 25-640-250. Evaluation of chapter.**

- A. Within three years after the effective date of this chapter, the Department shall perform an analysis on this chapter and provide the board with a report on the results. The analysis shall include (i) the purpose and need for the chapter; (ii) alternatives which would achieve the stated purpose of this chapter in a less burdensome and less intrusive manner; (iii) an assessment of the effectiveness of this chapter; (iv) the results of a review of current state and federal statutory and regulatory requirements, including identification and justification of requirements of this chapter which are more stringent than federal requirements; and (v) the results of a review as to whether this chapter is clearly written and easily understandable by affected entities.
- B. Upon review of the Department's analysis, the board shall confirm the need to (i) continue this chapter without amendments, (ii) repeal this chapter or (iii) amend this chapter. If the board's decision is to repeal or amend this chapter, the board shall authorize the department to initiate the applicable regulatory process to carry out the decision of the board.

## APPENDIX I - LETTER FROM CHIEF FINANCIAL OFFICER

**[Note:** *The instructions in brackets are to be replaced by the relevant information and the brackets deleted.*]

I am the chief financial officer of [insert: name and address of the operator or guarantor]. This letter is in support of the use of [insert: "the financial test of self-insurance," and/or "Guarantee"] to demonstrate financial responsibility for the containment and cleanup of discharges of oil in the amount of at least [insert: dollar amount] per occurrence and [insert: dollar amount] annual aggregate arising from operating [insert: "(an) aboveground storage tank(s)" and/or "(a) pipeline(s)"].

Aboveground storage tanks at the following facilities and/or pipelines are assured by this financial test by this [insert: "operator" and/or "guarantor"]:

[List for each facility: the name and address of the facility where tanks assured by this financial test are located, either the registration identification number assigned by the Department or the Oil Discharge Contingency Plan facility identification number, and whether tanks are assured by this financial test. If separate mechanisms or combinations of mechanisms are being used to assure any of the tanks at this facility, list each tank assured by this financial test.

List for each pipeline: the home office address and the names of the cities and counties in the Commonwealth where the pipeline is located.]

This [insert: "operator " or "guarantor"] has not received an adverse opinion, a disclaimer of opinion, or a "going concern" qualification from an independent auditor on the financial statements for the latest completed fiscal year.

[Fill in the information for Alternative I if the criteria of 9 VAC 25-640-70 B are being used to demonstrate compliance with the financial test requirements. Fill in the information for Alternative II if the criteria of 9 VAC 25-640-70 C are being used to demonstrate compliance with the financial test requirements.]

### ALTERNATIVE I

1. Amount of AST annual aggregate coverage being assured by a financial test, and/or guarantee  
\$ \_\_\_\_\_
2. Amount of pipeline annual aggregate coverage covered by a financial test, and/or guarantee  
\$ \_\_\_\_\_
3. Sum of lines 1 and 2  
\$ \_\_\_\_\_
4. Total tangible assets  
\$ \_\_\_\_\_
5. Total liabilities [if any of the amount reported on line 3 is included in total liabilities, you may deduct that amount from this line or add that amount to line 6]  
\$ \_\_\_\_\_
6. Tangible net worth [subtract line 5 from line 4]  
\$ \_\_\_\_\_  
Yes      No
7. Is line 6 at least equal to line 3 above?  
\_\_\_\_\_      \_\_\_\_\_
8. Have financial statements for the latest financial reporting year been filed with the Securities and Exchange Commission?  
Yes      No
9. Have financial statements for the latest financial reporting year been filed with the Energy Information Administration?  
Yes      No
10. Have financial statements for the latest financial reporting year been filed with the Rural Electrification Administration?  
Yes      No

11. Has financial information been provided to Dun and Bradstreet, and has Dun and Bradstreet provided a financial strength rating of at least equal to the amount of annual AST/pipeline aggregate coverage being assured? [Answer "Yes" only if both criteria have been met.] Yes No
12. If you did not answer Yes to one of lines 8 through 11, please attach a report from an independent certified public accountant certifying that there are no material differences between the data reported in lines 4 through 7 above and the financial statements for the latest financial reporting year.

## ALTERNATIVE II

1. Amount of AST annual aggregate coverage being assured by a financial test, and/or guarantee \$ \_\_\_\_\_
2. Amount of pipeline annual aggregate coverage covered by a financial test, and/or guarantee \$ \_\_\_\_\_
3. Sum of lines 1 and 2 \$ \_\_\_\_\_
4. Total tangible assets \$ \_\_\_\_\_
5. Total liabilities [if any of the amount reported on line 3 is included in total liabilities, you may deduct that amount from this line or add that amount to line \$ \_\_\_\_\_
6. Tangible net worth [subtract line 5 from line 4] \$ \_\_\_\_\_
7. Total assets in the U.S. [required only if less than 90 percent of assets are located in the U.S.] \$ \_\_\_\_\_
- Yes No
8. Is line 6 at least equal to line 3 above? \_\_\_\_\_
9. Are at least 90 percent of assets located in the U.S.? [If "No," complete line 10.] Yes No
10. Is line 7 at least equal to line 3? \_\_\_\_\_
- [Fill in either lines 11-14 or lines 15-17:]
11. Current assets \$ \_\_\_\_\_
12. Current liabilities \$ \_\_\_\_\_
13. Net working capital [subtract line 12 from line 11] \$ \_\_\_\_\_
- Yes No
14. Is line 13 at least equal to line 3? \_\_\_\_\_
15. Current bond rating of most recent bond issue \_\_\_\_\_
16. Name of rating service \_\_\_\_\_
17. Date of maturity of bond \_\_\_\_\_
18. Have financial statements for the latest fiscal year been filed with the SEC, the Energy Information Administration, or the Rural Electrification Administration? Yes No

[If "No," please attach a report from an independent certified public accountant certifying that there are no material differences between the data as reported in lines 4-17 above and the financial statements for the latest financial reporting year.]

**[For Alternatives I and II, complete the certification with this statement.]**

I hereby certify that the wording of this letter is identical to the wording specified in Appendix I of 9 VAC 25-640-10 et seq. as such regulations were constituted on the date shown immediately below.

[Signature]

[Name]

[Title]

[Date]

## APPENDIX II - GUARANTEE

**[Note:** *The instructions in brackets are to be replaced by the relevant information and the brackets deleted.*]

Guarantee made this [date] by [name of guaranteeing entity], a business entity organized under the laws of the state of [insert name of state], herein referred to as guarantor, to the State Water Control Board of the Commonwealth of Virginia and obligees, on behalf of [operator] of [business address].

### Recitals.

- (1) Guarantor meets or exceeds the financial test criteria of 9 VAC 25-640-70 B or C and D and agrees to comply with the requirements for guarantors as specified in 9 VAC 25-640-80.
- (2) Operator operates the following aboveground storage tank(s) and/or pipelines covered by this guarantee:

[List for each facility: the name and address of facility where tanks assured by this financial test are located, either the registration identification number assigned by the Department or the Oil Discharge Contingency Plan facility identification number, and whether tanks are assured by this guarantee. If more than one instrument is used to assure different tanks at any one facility, list each tank assured by this mechanism.

List for each pipeline: the home office address and the names of the cities and counties in the Commonwealth where the pipeline is located. ]

This guarantee satisfies the requirements of 9 VAC 25-640-10 et seq. for assuring funding for taking containment and cleanup measures necessitated by a discharge of oil; [if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the above-identified aboveground storage tank(s) and/or pipelines in the amount of [insert dollar amount] per occurrence and [insert dollar amount] annual aggregate.

- (3). [Insert appropriate phrase: "On behalf of our subsidiary" (if guarantor is corporate parent of the operator); "On behalf of our affiliate" (if guarantor is a related firm of the operator); or "Incident to our business relationship with" (if guarantor is providing the guarantee as an incident to a substantial business relationship with operator)][operator], guarantor guarantees to the State Water Control Board that:

In the event that operator fails to provide alternate coverage within 60 days after receipt of a notice of cancellation of this guarantee and the State Water Control Board has determined or suspects that a discharge has occurred at an aboveground storage tank and/or pipeline covered by this guarantee, the guarantor, upon instructions from the State Water Control Board, shall fund a standby trust fund in accordance with the provisions of 9 VAC 25-640-180, in an amount not to exceed the coverage limits specified above. In the event that the State Water Control Board determines that operator has failed to perform containment and cleanup for discharges arising out of the operation of the above-identified tank(s) and/or pipelines in accordance with 9 VAC 25-91-10 et seq., the guarantor upon written instructions from the State Water Control Board shall fund a standby trust in accordance with the provisions of 9 VAC 25-640-180, in an amount not to exceed the coverage limits specified above.

- (4) Guarantor agrees that if, at the end of any financial reporting year before cancellation of this guarantee, the guarantor fails to meet the financial test criteria of 9 VAC 25-640-70 B or C and D, guarantor shall send within 120 days of such failure, by certified mail, notice to operator. The guarantee will terminate 120 days from the date of receipt of the notice by operator, as evidenced by the return receipt.
- (5) Guarantor agrees to notify operator by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming the guarantor as debtor, within 10 days after commencement of the proceeding.
- (6) Guarantor agrees to remain bound under this guarantee notwithstanding any modification or alteration of any obligation of operator pursuant to 9 VAC 25-91-10 et seq. or 9 VAC 25-640-10 et seq.

(7) Guarantor agrees to remain bound under this guarantee for so long as operator shall comply with the applicable financial responsibility requirements of 9 VAC 25-640-10 *et seq.* for the above-identified tank(s) and/or pipelines, except that guarantor may cancel this guarantee by sending notice by certified mail to operator, such cancellation to become effective no earlier than 120 days after receipt of such notice by operator, as evidenced by the return receipt.

(8) The guarantor's obligation does not apply to any of the following:

- (a) Any obligation of operator under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;
- (b) Bodily injury to an employee of operator arising from, and in the course of, employment by operator;
- (c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;
- (d) Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by operator that is not the direct result of a discharge from an aboveground storage tank and/or pipeline;
- (e) Bodily damage or property damage for which operator is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 9 VAC 25-640-10 *et seq.*

(9) Guarantor expressly waives notice of acceptance of this guarantee by the State Water Control Board or by operator.

I hereby certify that the wording of this guarantee is identical to the wording specified in Appendix II of 9 VAC 25-640-10 *et seq.* as such regulations were constituted on the effective date shown immediately below.

Effective date:

[Name of guarantor]

[Authorized signature for guarantor]

[Name of person signing]

[Title of person signing]

Signature of witness or notary:



### APPENDIX III - ENDORSEMENT

[**Note:** *The instructions in brackets are to be replaced by the relevant information and the brackets deleted.*]

Name: \_\_\_\_\_ [name of each covered location]

Address: \_\_\_\_\_ [address of each covered location]

Policy Number: \_\_\_\_\_

Period of Coverage: \_\_\_\_\_ [current policy period]

Name of [Insurer or Group Self Insurance Pool]:

\_\_\_\_\_

Address of [Insurer or Group Self Insurance Pool]:

\_\_\_\_\_

Name of Insured: \_\_\_\_\_

Address of Insured:

\_\_\_\_\_

\_\_\_\_\_

#### Endorsement:

1. This endorsement certifies that the policy to which the endorsement is attached provides liability insurance covering the following aboveground storage tanks and/or pipelines in connection with the insured's obligation to demonstrate financial responsibility under 9 VAC 25-640-10 *et seq.*:

[List for each facility: the name and address of the facility where tanks assured by this mechanism are located, either the registration identification number assigned by the Department or the Oil Discharge Contingency Plan facility identification number, and whether tanks are assured by this mechanism. If more than one instrument is used to assure different tanks at any one facility, list each tank assured by this mechanism.]

List for each pipeline: the home office address and the names of the cities and counties in the Commonwealth where the pipeline is located.]

for containment and cleanup of a discharge of oil in accordance with and subject to the limits of liability, exclusions, conditions, and other terms of the policy; [if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the aboveground storage tank(s) and/or pipelines identified above.

The limits of liability are [insert the dollar amount of the containment and cleanup "each occurrence" and "annual aggregate" limits of the Insurer's or Group's liability; if the amount of coverage is different for different types of coverage or for different aboveground storage tanks, pipelines or locations, indicate the amount of coverage for each type of coverage and/or for each aboveground storage tank, pipeline or location], exclusive of legal defense costs, which are subject to a separate limit under the policy. This coverage is provided under [policy number]. The effective date of said policy is [date].

2. The insurance afforded with respect to such occurrences is subject to all of the terms and conditions of the policy; provided, however, that any provisions inconsistent with subsections (a) through (d) for occurrence policies and (a) through (e) for claims-made policies of this Paragraph 2 are hereby amended to conform with subsections (a) through (e):

- a. Bankruptcy or insolvency of the insured shall not relieve the ["Insurer" or "Pool"] of its obligations under the policy to which this endorsement is attached.
- b. The ["Insurer" or "Pool"] is liable for the payment of amounts within any deductible applicable to the policy to the provider of containment and cleanup, with a right of reimbursement by the insured for any such payment made by the ["Insurer" or "Pool"]. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated under another mechanism or combination of mechanisms as specified in 9 VAC 25-640-70 through -120.

- c. Whenever requested by the State Water Control Board, the ["Insurer" or "Pool"] agrees to furnish to State Water Control Board a signed duplicate original of the policy and all endorsements.
- d. Cancellation or any other termination of the insurance by the ["Insurer" or "Pool"], except for non-payment of premium or misrepresentation by the insured, will be effective only upon written notice and only after the expiration of 60 days after a copy of such written notice is received by the insured. Cancellation for non-payment of premium or misrepresentation by the insured will be effective only upon written notice and only after expiration of a minimum of 15 days after a copy of such written notice is received by the insured.

[Insert for claims-made policies:

- e. The insurance covers claims otherwise covered by the policy that are reported to the ["Insurer" or "Pool"] within six months of the effective date of cancellation or nonrenewal of the policy except where the new or renewed policy has the same retroactive date or a retroactive date earlier than that of the prior policy, and which arise out of any covered occurrence that commenced after the policy retroactive date, if applicable, and prior to such policy renewal or termination date. Claims reported during such extended reporting period are subject to the terms, conditions, limits, including limits of liability, and exclusions of the policy.]

I hereby certify that the wording of this endorsement is in no respect less favorable than the coverage specified in Appendix III of 9 VAC 25-640-10 et seq. and has been so certified by the State Corporation Commission of the Commonwealth of Virginia. I further certify that the ["Insurer" or "Pool"] is ["licensed to transact the business of insurance or eligible to provide insurance as an excess or surplus lines insurer in the Commonwealth of Virginia"].

[Signature of authorized representative of Insurer or Group Self Insurance Pool] [Name of person signing]

[Title of person signing], Authorized

Representative of [name of Insurer or Group Self Insurance Pool]

[Address of Representative]

## APPENDIX IV - CERTIFICATE OF INSURANCE

[Note: The instructions in brackets are to be replaced by the relevant information and the brackets deleted.]

Name: \_\_\_\_\_ [name of each covered location]  
Address: \_\_\_\_\_ [address of each covered location]  
\_\_\_\_\_  
\_\_\_\_\_

Policy Number: \_\_\_\_\_  
Endorsement (if applicable): \_\_\_\_\_  
Period of Coverage: \_\_\_\_\_ [current policy period]  
Name of [Insurer or Group Self Insurance Pool]:  
\_\_\_\_\_  
\_\_\_\_\_

Address of [Insurer or Group Self Insurance Pool]:  
\_\_\_\_\_  
\_\_\_\_\_

Name of Insured: \_\_\_\_\_  
Address of Insured: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### Certification:

1. [Name of Insurer or Group Self Insurance Pool], [the “Insurer” or “Pool”], as identified above, hereby certifies that it has issued liability insurance covering the following aboveground storage tank(s) and/or pipelines in connection with the insured’s obligation to demonstrate financial responsibility under 9 VAC 25-640-10 *et seq.*:

[List for each facility: the name and address of the facility where tanks assured by this mechanism are located, either the registration identification number assigned by the Department or the Oil Discharge Contingency Plan facility identification number, and whether tanks are assured by this mechanism. If more than one instrument is used to assure different tanks at any one facility, list each tank assured by this mechanism.

List for each pipeline: the home office address and the names of the cities and counties in the Commonwealth where the pipeline is located. ]

for containment and cleanup of discharges of oil; in accordance with and subject to the limits of liability, exclusions, conditions, and other terms of the policy; [if coverage is different for different tanks, pipelines or locations, indicate the type of coverage applicable to each tank, pipeline or location] arising from operating the aboveground storage tank(s) and/or pipelines identified above.

The limits of liability are [insert the dollar amount of the containment and cleanup “each occurrence” and “annual aggregate” limits of the Insurer’s or Group’s liability; if the amount of coverage is different for different types of coverage or for different aboveground storage tanks or locations, indicate the amount of coverage for each type of coverage and/or for each aboveground storage tank, pipeline or location], exclusive of legal defense costs, which are subject to a separate limit under the policy. This coverage is provided under [policy number]. The effective date of said policy is [date].

2. The [“Insurer” or “Pool”] further certifies the following with respect to the insurance described in Paragraph 1:

- a. Bankruptcy or insolvency of the insured shall not relieve the [“Insurer” or “Pool”] of its obligations under the policy to which this certificate applies.

b. The ["Insurer" or "Pool"] is liable for the payment of amounts within any deductible applicable to the policy to the provider of containment and cleanup with a right of reimbursement by the insured for any such payment made by the ["Insurer" or "Pool"].

This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated under another mechanism or combination of mechanisms as specified in 9 VAC 25-640-70 through -120.

c. Whenever requested by the State Water Control Board, the ["Insurer" or "Pool"] agrees to furnish to the State Water Control Board a signed duplicate original of the policy and all endorsements.

d. Cancellation or any other termination of the insurance by the ["Insurer" or "Pool"], except for non-payment of premium or misrepresentation by the insured, will be effective only upon written notice and only after the expiration of 60 days after a copy of such written notice is received by the insured. Cancellation for non-payment of premium or misrepresentation by the insured will be effective only upon written notice and only after expiration of a minimum of 15 days after a copy of such written notice is received by the insured. [Insert for claims-made policies]

e. The insurance covers claims otherwise covered by the policy that are reported to the ["Insurer" or "Pool"] within six months of the effective date of cancellation or nonrenewal of the policy except where the new or renewed policy has the same retroactive date or a retroactive date earlier than that of the prior policy, and which arise out of any covered occurrence that commenced after the policy retroactive date, if applicable, and prior to such policy renewal or termination date. Claims reported during such extended reporting period are subject to the terms, conditions, limits, including limits of liability, and exclusions of the policy.

I hereby certify that the wording of this instrument is identical to the wording in Appendix IV of 9 VAC 25-640-10 *et seq.* and that the ["Insurer" or "Pool"] is ["licensed to transact the business of insurance, or eligible to provide insurance as an excess or approved surplus lines insurer, in the Commonwealth of Virginia"].

[Signature of authorized representative of Insurer]

[Type name] [Title], Authorized Representative of [name of Insurer or Group Self Insurance Pool]

[Address of Representative]

## APPENDIX V - PERFORMANCE BOND

[**Note:** *The instructions in brackets are to be replaced by the relevant information and the brackets deleted.*]

Date bond executed: \_\_\_\_\_

Period of coverage: \_\_\_\_\_

Principal: [legal name and address of operator] \_\_\_\_\_

Type of organization: [insert "individual" "joint venture," "partnership," "corporation," or appropriate identification of type of organization] \_\_\_\_\_

State of incorporation (if applicable): \_\_\_\_\_

Surety(ies): [name(s) and business address(es)] \_\_\_\_\_

Scope of Coverage:

[List for each facility: the name and address of the facility where tanks assured by this mechanism are located, either the registration identification number assigned by the Department or the Oil Discharge Contingency Plan facility identification number, and whether tanks are assured by this mechanism. If more than one instrument is used to assure different tanks at any one facility, list each tank assured by this mechanism. For pipelines, list the home office address and the names of the cities and counties in the Commonwealth where the pipeline is located.]

List the coverage guaranteed by the bond: containment and cleanup of oil from a discharge arising from operating the aboveground storage tank and/or pipeline.]

Penal sums of bond:

Containment and Cleanup (per discharge) \$ \_\_\_\_\_

Annual Aggregate \$ \_\_\_\_\_

Surety's bond number: \_\_\_\_\_

Know All Persons by These Presents, that we, the Principal and Surety(ies), hereto are firmly bound to the State Water Control Board of the Commonwealth of Virginia, in the above penal sums for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where the Surety(ies) are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sums jointly and severally only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sums only as is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sums.

Whereas said Principal is required under § 62.1-44.34:16 of the Code of Virginia and under 9 VAC 25-640-10 *et seq.* to provide financial assurance for containment and cleanup necessitated by discharges of oil; [if coverage is different for different tanks or locations or pipelines, indicate the type of coverage applicable to each tank or location or pipeline] arising from operating the aboveground storage tanks and/or pipelines identified above, and

Whereas said Principal shall establish a standby trust fund as is required when a surety bond is used to provide such financial assurance;

Now, therefore, the conditions of the obligation are such that if the Principal shall faithfully contain and cleanup, in accordance with the State Water Control Board's instructions for containment and cleanup of discharges of oil arising from operating the tank(s) identified above, or if the Principal shall provide alternate financial assurance, as specified in 9 VAC 25-640-10 *et seq.*, within 120 days after the date the notice of cancellation is received by the Principal from the Surety(ies), then this obligation shall be null and void; otherwise it is to remain in full force and effect.

Such obligation does not apply to any of the following:

- (a) Any obligation of operator under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;
- (b) Bodily injury to an employee of operator arising from, and in the course of, employment by operator;
- (c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;

- (d) Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by operator that is not the direct result of a discharge from an aboveground storage tank and/or pipeline;
- (e) Bodily injury or property damage for which operator is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 9 VAC 25-640-10 *et seq.*

The Surety(ies) shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above.

Upon notification by the State Water Control Board that the Principal has failed to contain and cleanup in accordance with 9 VAC 25-91-10 *et seq.* and the State Water Control Board's instructions, the Surety(ies) shall perform containment and cleanup in accordance with 9 VAC 25-91-10 *et seq.* and the board's instructions, or place funds in an amount up to the annual aggregate penal sum into the standby trust fund as directed by the State Water Control Board under 9 VAC 25-640-180.

Upon notification by the State Water Control Board that the Principal has failed to provide alternate financial assurance within 60 days after the date the notice of cancellation is received by the Principal from the Surety(ies) and that the State Water Control Board has determined or suspects that a discharge has occurred, the Surety(ies) shall place funds in an amount not exceeding the annual aggregate penal sum into the standby trust fund as directed by the State Water Control Board under 9 VAC 25-640-180.

The Surety(ies) hereby waive(s) notification of amendments to applicable laws, statutes, rules, and regulations and agrees that no such amendment shall in any way alleviate its (their) obligation on this bond.

The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the annual aggregate to the penal sum shown on the face of the bond, but in no event shall the obligation of the Surety(ies) hereunder exceed the amount of said annual aggregate penal sum.

The Surety(ies) may cancel the bond by sending notice of cancellation by certified mail to the Principal, provided, however, that cancellation shall not occur during the 120 days beginning on the date of receipt of the notice of cancellation by the Principal, as evidenced by the return receipt.

The Principal may terminate this bond by sending written notice to the Surety(ies).

In Witness Whereof, the Principal and Surety(ies) have executed this Bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies) and that the wording of this surety bond is identical to the wording specified in Appendix V of 9 VAC 25-640-10 *et seq.* as such regulations were constituted on the date this bond was executed.

PRINCIPAL

[Signature(s)]

[Name(s)]

[Title(s)]

[Corporate seal]

CORPORATE SURETY(IES)

[Name and address]

State of Incorporation:

Liability limit: \$ \_\_\_\_\_

[Signature(s)]

[Name(s) and title(s)]

[Corporate seal]

[For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for Surety above.]

Bond premium: \$ \_\_\_\_\_

## APPENDIX VI - IRREVOCABLE STANDBY LETTER OF CREDIT

**[Note:** *The instructions in brackets are to be replaced by the relevant information and the brackets deleted.*]

[Name and address of issuing institution]

[Name and address of the Director]

Dear Sir or Madam: We hereby establish our Irrevocable Standby Letter of Credit No. \_\_\_\_\_ in your favor, at the request and for the account of [operator name] of [address] up to the aggregate amount of [in words] U.S. dollars (\$[insert dollar amount]), available upon presentation of

- (1) your sight draft, bearing reference to this letter of credit, No. \_\_\_\_\_ and
- (2) your signed statement reading as follows: "I certify that the amount of the draft is payable pursuant to regulations issued under authority of § 62.1- 44.34:16 of the Code of Virginia."

This letter of credit may be drawn on to cover containment and cleanup necessitated by discharges of oil arising from operating the aboveground storage tank(s) and pipelines identified below in the amount of [in words] \$ [insert dollar amount] per occurrence and [in words] \$ [insert dollar amount] annual aggregate:

[List for each facility: the name and address of the facility where tanks assured by this mechanism are located, either the registration identification number assigned by the Department or the Oil Discharge Contingency Plan facility identification number, and whether tanks are assured by this mechanism. If more than one instrument is used to assure different tanks at any one facility, list each tank covered by this instrument.

For pipelines, list: the home office address and the names of the cities and counties in the Commonwealth where the pipeline is located.]

The letter of credit may not be drawn on to cover any of the following:

- (a) Any obligation of operator under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;
- (b) Bodily injury to an employee of operator arising from, and in the course of, employment by operator;
- (c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;
- (d) Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by an operator that is not the direct result of a discharge of oil from an aboveground storage tank and/or pipeline;
- (e) Bodily injury or property damage for which an operator is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 9 VAC 25-640-50.

This letter of credit is effective as of [date] and shall expire on [date], but such expiration date shall be automatically extended for a period of [at least the length of the original term] on [expiration date] and on each successive expiration date, unless, at least 120 days before the current expiration date, we notify operator by certified mail that we have decided not to extend this letter of credit beyond the current expiration date. In the event that operator is so notified, any unused portion of the credit shall be available upon presentation of your sight draft for 120 days after the date of receipt by operator, as shown on the signed return receipt.

Whenever this letter of credit is drawn on under and in compliance with the terms of this credit, we shall duly honor such draft upon presentation to us, and we shall deposit the amount of the draft directly into the standby trust fund of operator in accordance with your instructions.

We certify that the wording of this letter of credit is identical to the wording specified in Appendix VI of 9 VAC 25-640-10 *et seq.* as such regulations were constituted on the date shown immediately below.

[Signature(s) and title(s) of official(s) of issuing institution]

[Date]

This credit is subject to [insert "the most recent edition of the Uniform Customs and Practice for Documentary Credits, published by the International Chamber of Commerce," or "the Uniform Commercial Code"].

## APPENDIX VII - TRUST AGREEMENT

**[Note:** *The instructions in brackets are to be replaced by the relevant information and the brackets deleted.*]

Trust agreement, the "Agreement," entered into as of [date] by and between [name of the operator], a [name of state] [insert "corporation," "partnership," "association," "proprietorship," or appropriate identification of type of entity], the "Grantor," and [name of corporate trustee], [insert "Incorporated in the state of \_\_\_\_\_" or "a national bank"], the "Trustee."

Whereas, the State Water Control Board of the Commonwealth of Virginia has established certain regulations applicable to the Grantor, requiring that an operator of an aboveground storage tank and/or pipeline shall provide assurance that funds will be available when needed for containment and cleanup of a discharge of oil arising from the operation of the aboveground storage tank and/or pipeline. The attached Schedule A contains for each facility the name and address of the facility where tanks covered by this [ trust agreement or standby trust agreement ] are located, either the registration identification number assigned by the Department or the Oil Discharge Contingency Plan facility identification number and for pipelines the home office address and names of the cities and counties in the Commonwealth where the pipeline is located;

Whereas, the Grantor has elected to establish [insert either "a guarantee," "surety bond," or "letter of credit"] to provide all or part of such financial assurance for the aboveground storage tanks and/or pipelines identified herein and is required to establish a standby trust fund able to accept payments from the instrument (This paragraph is only applicable to the standby trust agreement.);

Whereas, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this agreement, and the Trustee is willing to act as trustee;

Now, therefore, the Grantor and the Trustee agree as follows:

### Section 1. Definitions. As used in this Agreement:

- (a) The term "Grantor" means the operator who enters into this Agreement and any successors or assigns of the Grantor.
- (b) The term "Trustee" means the Trustee who enters into this Agreement and any successor Trustee.

### Section 2. Identification of the Financial Assurance Mechanism.

This Agreement pertains to the [identify the financial assurance mechanism, either a guarantee, surety bond, or letter of credit, from which the standby trust fund is established to receive payments (This paragraph is only applicable to the standby trust agreement.)].

### Section 3. Establishment of Fund.

The Grantor and the Trustee hereby establish a trust fund, the "Fund," for the benefit of the State Water Control Board of the Commonwealth of Virginia. The Grantor and the Trustee intend that no third party have access to the Fund. [The Fund is established initially as a standby to receive payments and shall not consist of any property.] Payments made by the provider of financial assurance pursuant to the State Water Control Board's instruction are transferred to the Trustee and are referred to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the Grantor as provider of financial assurance, any payments necessary to discharge any liability of the Grantor established by the State Water Control Board.

### Section 4. Payment for Containment and Cleanup.

The Trustee shall make payments from the Fund as the State Water Control Board shall direct, in writing, to provide for the payment of the costs of containment and cleanup of a discharge of oil arising from operating the tanks and/or pipelines covered by the financial assurance mechanism identified in this Agreement.

The Fund may not be drawn upon to cover any of the following:

- (a) Any obligation of operator under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;
- (b) Bodily injury to an employee of operator arising from, and in the course of, employment by operator;



- (c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;
- (d) Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by operator that is not the direct result of a discharge from an oil aboveground storage tank or pipeline;
- (e) Bodily injury or property damage for which operator is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 9 VAC 25-640-50.

The Trustee shall reimburse the Grantor, or other persons as specified by the State Water Control Board, from the Fund for containment and cleanup in such amounts as the State Water Control Board shall direct in writing. In addition, the Trustee shall refund to the Grantor such amounts as the State Water Control Board specifies in writing. Upon refund, such funds shall no longer constitute part of the Fund as defined herein.

#### Section 5. Payments Comprising the Fund.

Payments made to the Trustee for the Fund shall consist of cash and securities acceptable to the Trustee.

#### Section 6. Trustee Management.

The Trustee shall invest and reinvest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this Section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge his duties with respect to the trust fund solely in the interest of the beneficiaries and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

- (i) Securities or other obligations of the Grantor, or any other operator of the tanks, or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. § 80a-2(a), shall not be acquired or held, unless they are securities or other obligations of the federal or a state government;
- (ii) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the federal or state government; and
- (iii) The Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

#### Section 7. Commingling and Investment.

The Trustee is expressly authorized in its discretion:

- (a) To transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and
- (b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. § 80a-1 *et seq.*, including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

#### Section 8. Express Powers of Trustee.

Without in any way limiting the powers and discretions conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

- (a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the Trustee shall be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;
- (b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;
- (c) To register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, or to deposit or arrange for

the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

(d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the federal or state government; and

(e) To compromise or otherwise adjust all claims in favor of or against the Fund.

#### Section 9. Taxes and Expenses.

All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee shall be paid from the Fund.

#### Section 10. Advice of Counsel.

The Trustee may from time to time consult with counsel, who may be counsel to the Grantor, with respect to any questions arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

#### Section 11. Trustee Compensation.

The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the Grantor.

#### Section 12. Successor Trustee.

The Trustee may resign or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor trustee and this successor accepts the appointment. The successor trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee shall specify the date on which it assumes administration of the trust in writing sent to the Grantor and the present Trustee by certified mail 10 days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this Section shall be paid as provided in Section 9.

#### Section 13. Instructions to the Trustee.

All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are designated in the attached Schedule B or such other designees as the Grantor may designate by amendment to Schedule B. The trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. All orders, requests and instructions by the State Water Control Board to the Trustee shall be in writing, signed by the Executive Director of the Department of Environmental Quality, and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor or the State Water Control Board hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or the State Water Control Board, except as provided for herein.

#### Section 14. Amendment of Agreement.

This Agreement may be amended by an instrument in writing executed by the Grantor and the Trustee, or by the Trustee and the State Water Control Board if the Grantor ceases to exist.

#### Section 15. Irrevocability and Termination.

Subject to the right of the parties to amend this Agreement as provided in Section 14, this Trust shall be irrevocable and shall continue until terminated at the written direction of the Grantor and the Trustee, or by the Trustee and the State Water Control Board, if the Grantor ceases to exist. Upon termination of the Trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor.

#### Section 16. Immunity and Indemnification.

The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any directions by the Grantor or the State Water Control Board issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

#### Section 17. Choice of Law.

This Agreement shall be administered, construed, and enforced according to the laws of the Commonwealth of Virginia, or the Comptroller of the Currency in the case of National Association banks.

#### Section 18. Interpretation.

As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement.

In Witness whereof the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals (if applicable) to be hereunto affixed and attested as of the date first above written. The parties below certify that the wording of this Agreement is identical to the wording specified in Appendix VII of 9 VAC 25-640-10 *et seq.* as such regulations were constituted on the date written above.

[Signature of Grantor]

[Name of the Grantor]

[Title]

Attest:

[Signature of Trustee]

[Name of the Trustee]

[Title]

[Seal]

[Signature of Witness]

[Name of Witness]

[Title]

[Seal]

## APPENDIX VIII - CERTIFICATE OF ACKNOWLEDGMENT

**[Note:** *The instructions in brackets are to be replaced by the relevant information and the brackets deleted.*]

State of \_\_\_\_\_

County of \_\_\_\_\_

On this [date], before me personally came [operator's representative] to me known, who, being by me duly sworn, did depose and say that she/he resides at [address], that she/he is [title] of [corporation], the corporation described in and which executed the above instrument; that she/he knows the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation; and that she/he signed her/his name thereto by like order.

[Signature of Notary Public]

[Name of Notary Public]

My Commission expires:\_\_\_\_\_.

## APPENDIX IX - CERTIFICATION OF FINANCIAL RESPONSIBILITY

[**Note:** *The instructions in brackets are to be replaced by the relevant information and the brackets deleted.*]

Operator hereby certifies that it is in compliance with the requirements of 9 VAC 25-640-10 *et seq.*

The financial assurance mechanism[s] used to demonstrate financial responsibility under 9 VAC 25-640-10 *et seq.* is [are] as follows:

Indicate type of Mechanism:

- ☐ Letter from Chief Financial Officer
- ☐ Guarantee
- ☐ Insurance Endorsement or Certificate
- ☐ Letter of Credit
- ☐ Surety Bond
- ☐ Trust Fund

Name of Issuer: \_\_\_\_\_

Mechanism Number (if applicable): \_\_\_\_\_

Total number of gallons of aboveground storage capacity for which demonstration is provided:

# \_\_\_\_\_ Gals.

Amount of coverage for mechanism:

\$\_\_\_\_\_ containment and cleanup per occurrence and annual aggregate

Effective period of coverage: \_\_\_\_\_ to \_\_\_\_\_

Do(es) mechanism(s) cover(s): containment and cleanup caused by either sudden accidental discharges or nonsudden accidental discharges or accidental discharges? ☐ Yes ☐ No

If "No," specify in the following space the items the mechanism covers:

[Signature of operator]

[Name of operator]

[Title] [Date]

[Signature of notary]

[Name of notary] [Date] My Commission expires: \_\_\_\_\_.